JULY 8, 2019

TIME

AMERICA'S STORYTELLER

BY MINING THE PAST, NOVELIST **COLSON WHITEHEAD** TAKES READERS INTO AN UNEASY PRESENT

By MITCHELL S. JACKSON

SOMETHING BOTH SIDES

CAN AGREE ON:

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VOL. 194, NO. 2 | 2019

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A work site in Galera, Spain, where stone and steel parts are assembled for Barcelona's Sagrada Familia

Photograph by Luca Locatelli for TIME

ON THE COVER: *Photograph by Wayne Lawrence for TIME*

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Conversation

WHAT YOU SAID ABOUT ...

'MY WHOLE LIFE IS A BET' Some readers felt the July 1 cover photo of President Donald Trump—accompanied by that line about his gambler's attitude toward his 2020 bid—would be a boon to his campaign; Gisela Murtha in Silverton, Ore., called it "free advertising for his re-election." But Ashok Kulkarni in West Palm Beach, Fla., thought the gaming metaphor wasn't complete: "It does not explain if President Trump plays it with a full deck, at whose cost and ultimately who pays for it." Ann Nann of Jefferson, Mass., urged TIME to feature people "trying to make life for immigrants better" rather than giving space to Trump's controversial immigration platform, while Toni Odom, a Trump fan in Pensacola, Fla., applauded the article—and said a First Lady Melania Trump cover should be next.

> ***'His personal life and his business he can risk all he wants BUT NOT this country.'***
>
> **SAUL P. HELLER,** Peabody, Mass.

OUR SINKING PLANET Justin Worland's June 24 cover story on how Pacific island nations are pushing for bold climate action galvanized readers passionate about the environment. These countries have "redefined the climate debate," tweeted Simon Bradshaw of Oxfam Australia. Jeremy Lai in Chicago tweeted that the story is a reminder that climate change affects everyone but that the worst damage is often overlooked "because the consequences fall on the impoverished." Shirleen Chin added on Twitter that if the world is going to help these countries, accountability will be key: "A pledge is but words ... We need action!"

> ***'We cannot leave those most vulnerable to climate change behind.'***
>
> **BETH WOODTHORPE-EVANS,** Washington, D.C.

Back in TIME

This week's cover featuring writer Colson Whitehead—author of the Pulitzer Prize–winning 2016 novel *The Underground Railroad* and the new book *The Nickel Boys*—is just the latest chapter in TIME's long history of giving the red-border treatment to significant American novelists like the ones seen below. Subscribers can read the full cover stories at **time.com/vault**

WILLA CATHER
1931

ERNEST HEMINGWAY
1954

TONI MORRISON
1998

BEST PODCASTS OF 2019 Looking for something new to listen to this summer? Check out TIME's 10 favorite new podcasts of the year so far—everything from a history of classical composers to an inside look at the world of NBA referees—at **time.com/new-podcasts**

PRIDE Fifty years after an uprising at the Stonewall Inn in New York City launched a new era in the LGBTQ-rights movement, veterans of that era and young activists sat down with TIME to discuss what's changed and what hasn't. Watch their conversation at **time.com/stonewall-talk**

SETTING THE RECORD STRAIGHT

In "Once More, With Feelings" (June 17), we misstated where the city of Moline is located. It is in Illinois. In "The Vaccine Battlegrounds" (June 24), we misidentified the capital of Washington State. It is Olympia.

The "Tree of Life" depicted on TIME's Nov. 12, 2018, cover is an iconic image with roots in a variety of mystical traditions, including the Jewish Kaballah. Edel Rodriguez's rendering was inspired by the work of New York artist Karla Gudeon, whose work can be found at karlagudeon.com

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‘We promise that we’ll be good role models to society.’

EKAPOL CHANTAWONG, at a June 24 ceremony in Mae Sai, Thailand, marking a year since he and the soccer team he coached became famous after their rescue from a cave

‘A government that roams the land … scrubbing away any reference to the divine will strike many as aggressively hostile to religion.’

SAMUEL ALITO, U.S. Supreme Court Justice, arguing in a majority opinion that a 40-ft.-tall cross honoring World War I soldiers, which stands on state property in Bladensburg, Md., is not an unconstitutional endorsement of religion

‘A Border Patrol agent came in our room with a 2-year-old boy and asked us, “Who wants to take care of this little boy?”’

UNIDENTIFIED GIRL, describing how children were left to take care of one another at a migrant-detention facility near El Paso, Texas; after a June 21 Associated Press report highlighted lawyers’ findings on conditions there, about 250 children were transferred out and Congress debated an emergency aid bill to help migrants

‘You can still participate if you do in fact support the administration, you just can’t talk about it here.’

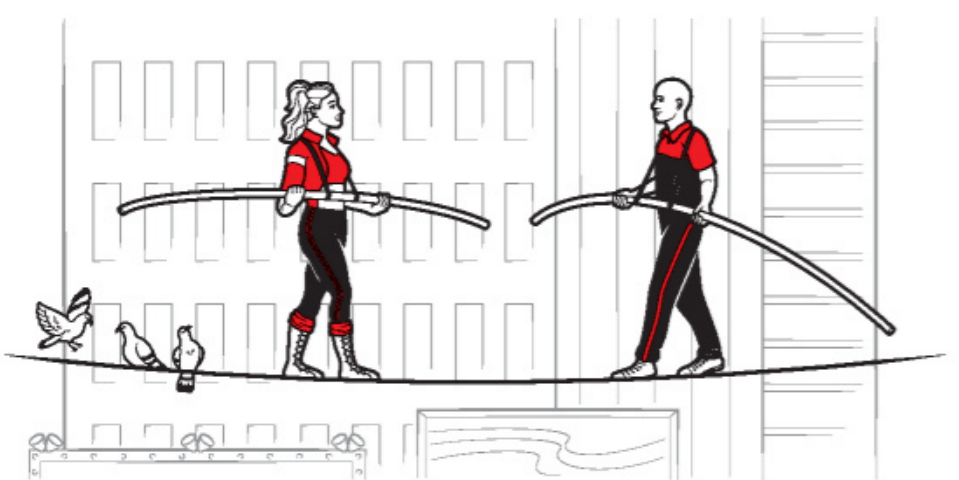
RAVELRY, a social network for knitters, announcing in a June 23 statement that it’s banning content that’s pro–Donald Trump and his Administration

0-0-0-0

Winning numbers for the North Carolina lottery’s Pick 4 game drawn on June 22, played by 2,014 winners, setting a state record for prize money in a single Pick 4 drawing

25

Number of stories above the ground of the 1,300-ft.-long wire on which Nik and Lijana Wallenda—siblings known professionally as the Flying Wallendas—walked between two skyscrapers in Manhattan’s Times Square in a first-of-its-kind stunt on June 23



Monarch butterflies
Study finds those born in captivity struggle to migrate

Monarchy
Kate Middleton succeeds Queen as Royal Photographic Society patron

ILLUSTRATIONS BY BROWN BIRD DESIGN FOR TIME

SOURCES: NEW YORK TIMES; NPR; VANITY FAIR

The Brief

TANGLED WEB
For Tehran, tensions with the U.S. have played into the decision to mobilize for a digital battlefield

INSIDE

A GRIM REMINDER OF THE SITUATION AT THE U.S. BORDER

A BLOCK-BY-BLOCK LOOK AT LIFE EXPECTANCY IN THE U.S.

THE MANY CINDERELLAS OF NOVELIST JUDITH KRANTZ

PHOTOGRAPH BY ROUZBEH FOULADI

NATIONAL SECURITY

The U.S. and Iran are already at war online

By W.J. Hennigan

WHEN A U.S. NAVY SURVEILLANCE DRONE was shot down over the Strait of Hormuz on June 20, the U.S. blamed Iran. The commander of Iran's Islamic Revolutionary Guard Corps (IRGC) said his country was "ready for war," and President Donald Trump responded by declaring that Iran had made a "very big mistake." Around the world, observers worried that the two countries were headed for battle. In a sense, however, they were already at war.

Also on June 20, the U.S. military conducted a Trump-approved cyberstrike on Iran-linked computer systems, U.S. officials say; two days later, the Department of Homeland Security reported it had seen a "rise in malicious cyber activity" directed at U.S. industry by hackers with Tehran ties. These were the latest moves in a rapidly escalating cyberconflict that is proving to be a test run in the future of war. Compared with a potential military clash over the drone's destruction, the little noticed computer skirmish may seem reassuring. But if it was an off-ramp from the highway to airstrikes and invasion, it also posed new dangers of its own.

There are no international rules governing digital conflict; tracing attacks is notoriously difficult, and targets can include industry, infrastructure and ordinary citizens. "There is not even an agreed-upon definition of what constitutes a cyber 'act of war,' assuming the term itself is still relevant," former U.S. Director of National Intelligence James Clapper tells TIME. The U.S. has powerful capabilities in this new area. Military hackers and coders at Fort Meade, Md., maintain a long list of potential targets. The command, created in 2009, has played a larger role in war planning since the Trump Administration granted commanders new authority and Congress quietly issued a declaration defining online operations as a traditional military activity.

The U.S. military refused to comment on the latest offensive, after Yahoo News first reported that hackers with U.S. Cyber Command had taken aim at computers belonging to a spy group connected to the IRGC. Subsequent reports revealed U.S. attacks on networks belonging to a proxy militia and military missile-launch systems. But Iranian officials said they failed, and cybersecurity firms say Tehran-linked hackers retaliated by increasing attacks on U.S. networks.

Such attacks have been going on for more than a decade, mostly for espionage. But cyberacts hold potential for physical destruction. It is believed that the U.S. and Israel teamed together on a cyberattack in 2010 that briefly disabled spinning centrifuges at a uranium-enrichment facility in the Iranian city of Natanz, and in 2016, a grand jury in the Southern District of New York indicted an Iranian, Hamid Firoozi, for hacking into the control system of a dam near New York City. A 2018 report by Collin Anderson and Karim Sadjadpour of the Carnegie Endowment for International Peace described the evolving risks, noting "legitimate reasons to be concerned" that Iran is readying for a world in which such actions are part of its wartime toolbox.

The U.S. is worried that those preparations are about to pay off. Since it walked away from the 2015 six-nation deal to curb Iran's nuclear-weapons program, the Trump Administration has continued to ratchet up its "maximum pressure" campaign against Tehran, imposing ever tougher economic sanctions. That, experts like Georgetown University professor Trita Parsi say, prompted Iran's latest series of attacks on shipping in the Persian Gulf. As the U.S. runs out of economic pressure to apply and Trump balks at the costs of a new military conflict in the Middle East, cyberspace seems like the inevitable next arena of conflict.

'We're not going to be talking too much about it. You're going to find out. [Iran] made a very big mistake.'

PRESIDENT TRUMP, on the U.S. response to the June 20 downing of a Navy drone

FOR NOW, the costs of cyberwar have gone largely unnoticed. But a series of ransomware attacks, in which hackers lock their victims out of computer networks until they pay up, have stung the U.S. A recent breach cost the city of Baltimore $18 million to regain control of its data, and attacks on institutions such as hospitals, schools and local police endanger public safety.

As threats increase, so do efforts to establish rules akin to those governing armed conflict. For years, U.N. officials have worked to establish a sort of cyber–Geneva Convention to protect civilians from state-sponsored cyberattacks. After all, while digital warfare may keep troops safe from combat, shutting down an adversary's infrastructure or communications could affect hospitals or aid organizations, and not just in the target country. But world powers haven't yet taken concrete steps toward a comprehensive agreement. Sergio Caltagirone, a vice president at cybersecurity firm Dragos, said that's unlikely to happen until a catastrophic event forces them to the negotiating table. In the meantime, he says, there's a greater risk of "harm to civilian lives and livelihoods."

What push there has been for rules and norms—to define acceptable behavior and the types of targets allowed—has so far been stymied by "more aggressive strategies carried out by the world's powers," says Peter W. Singer, a co-author of *LikeWar,* a book on the weaponization of social media. "Until that effort is taken up again, it's essentially a free-fire zone online." □

PREVIOUS PAGE: ZUMA WIRE; TRUMP: GETTY IMAGES; BORDER: JULIA LE DUC—AP

The bodies of Óscar Alberto Martínez Ramírez and his daughter Valeria in the Rio Grande

IMMIGRATION

A shocking photo captures the cost of the border crisis

TWENTY-THREE-MONTH-OLD VALERIA and her father Óscar Alberto Martínez Ramírez drowned trying to cross the border from Mexico into the U.S., according to the Associated Press. After journeying from El Salvador on April 3, the family were unable to set a date to request asylum in the U.S. and instead attempted to cross the Rio Grande. The photo, taken on June 24 by journalist Julia Le Duc, has been shared internationally by news outlets and on social media, and sparked international outrage—both from migrant advocates who argue that such an image will galvanize action and by those who consider the photo exploitative.

For an activist like Fernando Garcia, director of the Border Network for Human Rights, the photo is a turning point in the immigration debate, and he compared it to the 2015 photo of a drowned Syrian refugee, 3-year-old Alan Kurdi, on a Turkish beach. "People have become numbers; they've become statistics," Garcia says. "People talk about immigrants in the absence of their humanity. As sad as it is, I think we need to show the photo."

Novelist Luis Alberto Urrea, who has written about migration, called the photo humanizing. "I have avoided those kinds of photos all my career and in all my books," Urrea tells TIME. "At a moment like this, maybe this step has to be taken."

But not all agree that publishing the photograph was right. The National Association of Hispanic Journalists condemned the use of the image, calling the Associated Press's publication "exploitative." "Men, women and children cross the border daily, often escaping terror with hopes of a better life, knowing the peril that awaits them as they attempt to make the long journey to America."

For Luis Hernández, a multimedia journalist at Univision in El Paso, Texas, the photograph was itself a point of departure. "You need to get all the information," he says. "Show people that this person had a name, had a history, had context, had loved ones." —JASMINE AGUILERA

NEWS TICKER

New info in citizenship Census battle

Days away from the deadline to print forms, Democrats on the House Oversight Committee said on June 25 they had new evidence the Trump Administration had political reasons for **wanting to ask about citizenship on the 2020 Census.** Critics say the question will lead minority populations to be undercounted.

Venezuelan officials detained

Venezuelan authorities arrested six members of the country's military and police forces on June 21, according to activists and the detainees' families. President Nicolás Maduro has **increased pressure on the opposition** since a military uprising led by Juan Guaidó failed on April 30.

Charlottesville driver asks for mercy

Lawyers for James Alex Fields, who pleaded guilty to federal hate crimes after he ran his car into counterprotesters in Charlottesville, Va., in 2017—**killing antiracism activist Heather Heyer**—asked a judge on June 21 not to sentence him to life in prison, arguing "retribution has limits."

NEWS TICKER

Medal of Honor given to Iraq War vet

President Donald Trump on June 25 presented the Medal of Honor to **Army Staff Sgt. David Bellavia, making him the first living veteran of the Iraq War** to receive the country's top military award. Bellavia's actions during the Battle of Fallujah were featured in a TIME cover story in 2004.

Mueller to testify on findings

Former special counsel Robert Mueller plans to testify before the House Permanent Select Committee on Intelligence and the House Judiciary Committee on July 17. Mueller was reluctant to testify, saying his report on the 2016 election spoke for itself, but **agreed to appear after the committees issued a subpoena** compelling him to do so.

Passenger train derails in Bangladesh

A train carrying about 2,000 people derailed while crossing a bridge in northeast Bangladesh on June 23, **killing at least five people** and injuring more than 100, officials say. Rescuers used cranes to pull up two carriages that were dangling over a canal.

GOOD QUESTION

Does ZIP code equal life expectancy?

U.S. LIFE EXPECTANCY IS CURRENTLY 78.6 years—a number determined by factors including genes, gender, lifestyle and luck. But the single best predictor of longevity might be geography. Growing evidence suggests people's ZIP codes might hold the most information about how long they'll live.

Researchers from the New York University School of Medicine recently used data from NYU Langone Health's City Health Dashboard to find that 56 of the 500 largest U.S. cities are home to people who can expect to live at least 20 fewer years than those in other neighborhoods, even if they're just blocks away. In Chicago, the city with the largest disparity, life expectancy varied by 30.1 years between neighborhoods; in both Washington, D.C., and New York City, it varied by more than 27 years. Meanwhile, residents of Fishers, Ind., the city with the smallest gap, can expect to die within 2.4 years of their neighbors across the city.

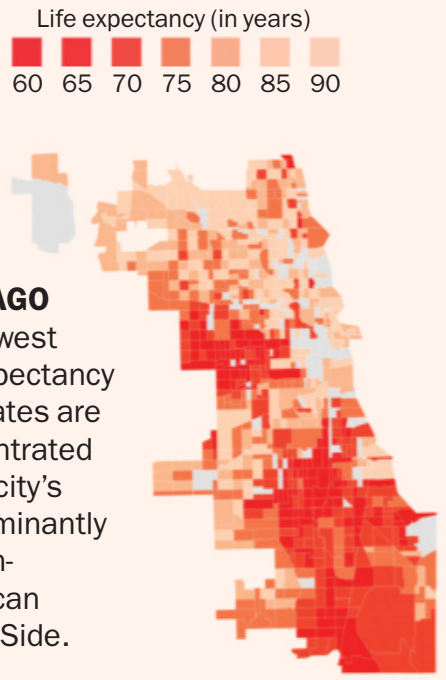
Where you live directly affects your health in a number of ways, from exposure to air pollution and toxins to accessibility of healthy food, green space and medical care. It's also a subtler indicator of socioeconomic factors that are inherent to health and longevity, including race and income. The cities with the widest gaps in life expectancy, the NYU researchers found, were those most segregated by race and ethnicity, with predominantly minority neighborhoods often facing obstacles—like untenable housing costs or subpar social services—that didn't affect majority-white neighborhoods to the same degree. Chicago is far more segregated than most U.S. cities, and largely black neighborhoods on the South Side have the city's lowest life expectancies.

Links among race, poverty and health have been reinforced by years of inequality, and disentangling them won't be easy. But, the NYU researchers argue, understanding the ties between ZIP code and health can help local lawmakers, public-health officials and community representatives begin to level the playing field for their constituents.

—JAMIE DUCHARME AND ELIJAH WOLFSON

Urban split

These maps show average life expectancy in the Census tracts of the U.S.'s three most disparate cities:



CHICAGO
The lowest life-expectancy estimates are concentrated in the city's predominantly African-American South Side.

D.C.
In the capital, lower life expectancies—and poverty—are concentrated east of the Anacostia River.

NEW YORK
Just a few blocks separate the Upper East Side, with some of the city's longest life expectancies, from Harlem, with some of the shortest.

MAPS BY ELIJAH WOLFSON
SOURCE: NYU LANGONE

KRANTZ: TERRY O'NEILL—ICONIC IMAGES/GETTY IMAGES; SHEARER: BILL RAY—THE LIFE PICTURE COLLECTION/GETTY IMAGES

DIED
George Rosenkranz, a chemist who helped create the birth control pill, on June 23 at 102.

Dave Bartholomew, a trumpeter, producer and composer known for his hits with Fats Domino, on June 23 at 100.

CHOSEN
Italy, as the **host of the 2026 Winter Olympics,** by the International Olympic Committee on June 24. Hosting duties will be split between Milan and the Cortina d'Ampezzo ski resort.

DEMANDED
The **resignation of Czech Prime Minister Andrej Babis,** by an estimated 250,000 people who rallied in Prague on June 23.

KILLED
The **chief of staff of the Ethiopian army** and three other officials, in an attempted June 22 coup. The general accused of organizing it was killed on June 24.

APPROVED
Vyleesi, a **drug to treat low sex drive in women,** by the U.S. Food and Drug Administration, on June 21. It is the second drug of its kind to be approved.

ASSEMBLED
Thousands of Ukrainians, including politicians, in the country's **biggest-ever gay-pride parade,** on June 23.

ESCAPED
Italian mafia boss Rocco Morabito, from a prison in Uruguay, officials in the country said June 24.

Krantz, seen by her swimming pool in 1986, got her start in journalism before the novel Scruples *shifted her career*

DIED

Judith Krantz

Writer of latter-day fairy tales

By Jennifer Weiner

JUDITH KRANTZ WROTE JUICY CINDERELLA STORIES IN WHICH a poor, plucky girl possessed of otherworldly beauty—and perhaps even a royal title—could, through hard work, climb to the top of her chosen world, acquiring a closet full of clothes and significant sexual satisfaction along the way. I swiped Krantz's *Princess Daisy* off my mother's bookshelf (probably when I was way too young for it) and fell into the world of Daisy, born Russian royalty and consigned to poverty through the machinations of an evil stepbrother. She talks her way into an advertising job and eventually makes it to the top of a perfume-and-cosmetics empire.

The ladies crafted by Krantz, who died on June 22 at 91, were winners. Whether they flew planes or ran magazines or ran Beverly Hills boutiques, they did it better than anyone else, and were rewarded with jewels, mansions, designer wardrobes and love. Her stories were lavished with name brands, laced with exclusive locales, studded with … well, studs. If the critics reviled her as much as readers loved her, it bothered her not at all. "It's not Dostoyevsky," she told the Washington *Post*. "It's not going to tax your mental capacities."

Maybe not. But it certainly fired my imagination, and those of many other readers. In her characters, we could see ourselves, only amplified. And we could aspire to be—or to create on the page—a woman as strong and smart and sexy and confident as one of Judith Krantz's world-beating heroines.

Weiner is the best-selling author of the new novel *Mrs. Everything*

DIED

John Shearer

Lens on life

JOHN SHEARER CAPTURED on camera iconic American moments ranging from John-John's salute of John F. Kennedy's casket to Muhammad Ali's 1971 fight with Joe Frazier. But his favorite project, according to his wife Marianne, was a story about the South Bronx gang known as the Reapers, which ran in LIFE magazine in 1972. Shearer lived with the gang's leader for weeks, sleeping on his couch and taking pictures at all hours.

This willingness to put himself into the story was a hallmark of the way Shearer, who died at 72 on June 22, brought life to his work. He became one of the youngest staff photographers at a major publication when *Look* magazine hired him at age 17, and became the second African-American photographer at LIFE. Throughout, he was committed to telling stories through his photos. "His photographs really capture the soul of an individual," Marianne says, "and where they are in the world."

—ABIGAIL ABRAMS

Rwandan President **Paul Kagame** is happy to discuss what makes an African strongman

By Karl Vick

PERSONAL BUSINESS IS WHAT'S BROUGHT THE President of Rwanda to Manhattan. Paul Kagame's daughter is graduating from Columbia University with a master's degree in international affairs. "I probably will have to come back in two weeks again," Kagame says of his U.S. visit, in a room in the Park Hyatt, half a block south of Central Park. "My son is graduating from Williams College."

His country, meanwhile, is marking an anniversary. It was 25 years ago that some 1 million Rwandans were murdered, a genocide that went unchecked by Western governments. The slaughter lasted until guerrilla forces led by Kagame drove the killers from the country that he has ruled since—six years in the de facto capacity of Vice President and since 2000 as President.

The trauma still defines Rwanda, not least in the minds of foreigners. "We live kind of under that shadow," Kagame says, adding, in the abstract terms he prefers, "It is just one set of narratives built around a geographically small country in the heart of the continent of Africa. They may not even bother to know where it is or even what it is."

What Rwanda is, even before the genocide, is an unusual parcel of East Africa: made up entirely of hills, with a population of 12 million extremely organized from the center outward—prefecture, commune, sector. The *genocidaires* used that organization to mobilize the slaughter by ethnic Hutu extremists against the ethnic Tutsi minority. That organization survived the genocide and in the quarter-century since has reported to Kagame.

What has he done with it? It depends on whom you ask.

"Twenty-five years on, we have built a stable society, a stable economy," Kagame says. "We are developing. Everything is still a work in progress, but you can measure and understand where we have been and where we are now."

The measures are impressive. Since 1990, life expectancy has risen from 48 years to 66, and the mortality rate for children under 5 dropped from 152 per 1,000 live births to 42. The country remains poor, but Kagame's government is trying to position it as something exceptional in Africa—a place to do business. It ranks 29th in a World Bank survey assessing the business environments of 190 nations. And Rwanda has made striking progress when it comes to gender parity: 61% of its legislators are women, higher than in any other country. The World Economic Forum says only five countries have more significantly narrowed their gaps.

But in other ways, Kagame's government fulfills the cliché of governance in Africa, where the watchdog organization Freedom House says only 20% of nations qualify as "free." Rwanda is essentially a single-party state, dominated by the Rwandan Patriotic Front and with Kagame in the role of indispensable man. Under the constitution, revised four years ago, he can serve until 2034.

The U.S. Department of State cites reports of "arbitrary killings by state security forces; forced disappearance by state security forces; torture by state security forces including asphyxiation, electric shocks, mock executions; arbitrary detention by state security forces; political prisoners" and more. Political opponents have turned up dead in other countries.

The Associated Press summed things up succinctly in April: "25 years after genocide, Rwanda's Kagame is praised, feared." Kagame studies the two descriptions, then hands the headline back. "There is a third one," he announces. "The third one is that the people of Rwanda know what they want."

KAGAME, 61, GREW UP in a refugee camp in neighboring Uganda, to which his parents had fled from an earlier assault on the Tutsi population. He is known as remote, and his cool reserve plays to both of his reputations: technocrat and iceman. But at the Hyatt, in a $700 room crowded not with furniture but with photographers and plainclothes security, the topics he warms to are the most difficult.

One is foreign aid. Money poured into Rwanda after the genocide, both because the need was great and because its government appeared to be more competent than most at spending rather than pocketing it. Kagame, however, has had enough of what comes with the money.

"There is a permanent role of supervision," he says. "The initial, first resources given us should create a foundation for us to build on. This is how people realize their own dignity, those who care about it." Speaking of

KAGAME QUICK FACTS

U.S. training
Kagame attended the U.S. Army Command and General Staff College in Leavenworth, Kans.

Royal blood?
Both Kagame and his wife Jeannette are said to be related to the Tutsi royal court that ruled pre-colonial Rwanda.

Invader in chief
In the late '90s, Kagame's forces twice swept over the Democratic Republic of Congo, in the name of protecting ethnic Rwandans in its eastern section.

Watch an interview with President Kagame at **time.com/kagame-video**

CELESTE SLOMAN FOR TIME

dignity, he was the first African leader to meet with President Trump after his infamous reference to "sh-thole countries." He let it pass. "If anyone insulted Rwanda or me, then I try to make sense of it," Kagame says. "I say, What is it that gives basis to this kind of thing?"

He appears less inclined toward introspection on the question of his own extended tenure and what it might say about the quality of Rwandan democracy. "There is a tendency to think these African leaders, they're just there to do wrong things to their own people," Kagame says. "They're so bad, they don't even know what is good for them." He says he "wanted to leave" when his last term expired and had to be coaxed into running in the election in which, by the official tally, he won 99% of the vote. A key rival, Diane Rwigara, was first barred from running and then arrested.

'I know what I am doing. I know what is good for me. I don't need to be told by anybody.'

PAUL KAGAME, President of Rwanda

"I'm not a leader fraudulently," Kagame says. "I've made investments. My investments are not about infringing on people's rights. I'm not that kind of person."

One danger of remaining in office for decades, of course, lies in what comes next. Kagame says his party is not grooming a successor. "That becomes more or less a monarchy or something like that," he says. But by many measures he already qualifies as a strongman, albeit one who takes the presidential Gulfstream G650 to an Ivy League graduation rather than on a shopping trip to Paris (a common destination of the continent's more kleptomaniacal rulers).

"I have fought for my own freedom," he says, only slightly animated in his defiance. "I have fought for the freedom of my people better than these supervisors who come and say, 'Well, you are doing this. You know, don't do this.' No! I know what I am doing. I know what is good for me. I don't need to be told by anybody."

Rwanda's President lights up at the suggestion that perhaps, in some quarters, more is to be expected of his government because it stopped the genocide—the idea being that the people who ended a great evil must be heroically virtuous. But human-rights groups argue that every crime is equal: just as those who ordered the genocide faced international justice, so should commanders accused of orchestrating revenge killings. This debate has been going on since 1994, and it is snarled in a dark history. Kagame's forces pursued the *genocidaires* into the forests of the Democratic Republic of Congo and there prosecuted a pair of wars that claimed some 5 million lives, mostly by starvation and disease.

"Every problem about that situation has been sitting on our shoulders," says Kagame, who is having none of it. "We are being blamed because we are still alive. If we are not"—he laughs—"they would have nobody to blame. I think between surviving and being blamed and not surviving, it is obvious. The choice is very clear." □

WORLD

Catching the Roman light

EVERYONE KNOWS THAT ROME IS the Eternal City—the passage of time palpable at every turn within its labyrinthine streets. But time seizes the city most immediately on the summer solstice, when the iconic Pantheon—named for "every god"—is transformed by the sun. On June 21, the sun perfectly aligns with the roof's oculus and illuminates the whole space. For the past six years, Elizabeth Bick has embarked on "Every God," a photographic exploration documenting visitors to the Pantheon at this annual moment. Bick calls the project a "celebration of humanity and their performance."

Her remarkable series of photographs calls to mind a complicated dance enacted by a host of visitors who find themselves spontaneously bathed in light and shadow. "It is one part endurance piece, and one part preoccupation with an evolving visitor response to the space," she says. Just as the light from above intensifies at this time of year, so does the influx of visitors. Bick stands in the dark shadows, poised for the perfect moment.

—ELIZABETH GEOGHEGAN

The photos come from Elizabeth Bick's series "Every God." All were taken on or around the summer solstice, June 21, inside Rome's Pantheon. This was Bick's sixth year photographing the series, which "stops time" as tourists and pilgrims enter the light.

PHOTOGRAPHS BY ELIZABETH BICK FOR TIME

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RELIGION

THE EVANGELICAL REPUBLIC OF FEAR

By David French

On June 21, the writer E. Jean Carroll came forward with a vivid and disturbing claim that Donald Trump raped her in a department store in the 1990s. She is the 22nd woman to allege that Trump committed acts of sexual misconduct. These claims are more extensive and more corroborated than the accusations against Bill Clinton.

INSIDE

DEMOCRACY IN ISTANBUL CHALLENGES ERDOGAN

SOCCER'S VIDEO REPLAYS MESS WITH WORLD CUP

BREAKING DOWN THE BIGGEST MUELLER MYTHS

It's worth contrasting Trump, who denied Carroll's claim (as well as his other accusers'), with Clinton because his scandals helped spur the Southern Baptist Convention in 1998 to issue its seminal "Resolution on Moral Character of Public Officials." That document's key statement was ominous and unequivocal: "Tolerance of serious wrong by leaders sears the conscience of the culture, spawns unrestrained immorality and lawlessness in the society, and surely results in God's judgment."

The relentless drumbeat of claims against Trump—combined with the clear moral declarations of the past—have caused millions of Americans to look at their evangelical fellow citizens and ask, simply: Why? Why have you abandoned your previous commitment to political character to embrace Donald Trump?

Part of the explanation is undeniably basic partisanship and ambition. White evangelicals are largely Republican, and they're generally going to vote for Republicans. And proximity to power has always had its attractions for religious charlatans of all stripes. But I'd suggest the real reason for the breadth and depth of evangelical support is deeper and—perversely—even more destructive to its religious witness.

Then-candidate Trump at a 2016 service at the International Church of Las Vegas

That reason is fear.

Talk to engaged evangelicals, and fear is all too often a dominant theme of their political life. The church is under siege from a hostile culture. Religious institutions are under legal attack from progressives. The left wants nuns to facilitate access to abortifacients and contraceptives, it wants Christian adoption agencies to compromise their conscience or close, and it even casts into doubt the tax exemptions of religious education institutions if they adhere to traditional Christian sexual ethics.

These issues are legally important, and there are reasons for evangelicals to be concerned. But there is no reason for evangelicals to abandon long-held principles to behave like any other political-interest group.

Instead, the evangelical church is called to be a source of light in a darkening world. It is not given the luxury of fear-based decisionmaking. Indeed, of all the groups in American life who believe they have the least to fear from American politics, Christians should top the list. The faithful should reject fear.

This is made plain to young Christians from the early days of Sunday school. There, many millions of young believers are taught the biblical verse: "For God gave us not a spirit of fear but of power and love and self-control."

BUT IN 2016, something snapped. I saw Christian men and women whom I've known and respected for years respond with raw fear at the very idea of a Hillary Clinton presidency. They believed she was going to place the church in mortal danger. The Christian writer Eric Metaxas wrote that if Hillary won, America's chance to have a "Supreme Court that values the Constitution" will be "gone." "Not for four years, not for eight," he said, "but forever."

That wasn't faith speaking. They were the words of fearful men grasping at fading influence by clinging to a man whose daily life mocks the very values that Christians seek to advance.

But why? The American evangelical church isn't so weak that it needs Trump's version of secular salvation. The early persecuted church would be stunned at the modern American church's immense political strength. It has become so strong that it exercises veto power over the political prospects of any Republican nominee.

Yet the church is acting as if it needs Trump to protect it. That's not courageous. It's repulsive. And so long as this fear continues, expect the church's witness to degrade further. In seeking protection from its perceived enemies, the church has lost its way.

It's time for evangelicals to exercise their political veto power. America's conservative people of faith should seek a primary challenger to Trump and send a message to the GOP that it will not compromise any longer. And it should do so from a position of confidence—and faith. ☐

SHORT READS

Highlights from stories on **time.com/ideas**

A dangerous mission

President Trump was right to call off strikes on Iran, writes retired Admiral James Stavridis. But the last-minute decision is not without consequences, as it **"creates further uncertainty in crews already poised on the edge of combat."**

Messing with Texas

When a Chicago-based investment firm bought a controlling interest in Whataburger, fans of the Texas chain were beside themselves. Adam Chandler, author of *Drive-Thru Dreams,* explains why: **"Strongly felt passion for regional fast food is practically a national rite."**

Overlooked in the opioid crisis

The President's Council of Economic Advisers recently highlighted potential solutions for fighting the opioid crisis. Missing from the list, write former Secretary of Health and Human Services Tommy Thompson and David Hebert, CEO of the American Association of Nurse Practitioners, is **the idea of empowering nurse practitioners who are "well positioned to help patients get the care they deserve."**

EVAN VUCCI—AP

Spitsbergen, Norway.

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THE RISK REPORT

Istanbul's rebuke of Erdogan shows that democracy lives

By Ian Bremmer

IN MARCH, TURKISH opposition candidate Ekrem Imamoglu defeated Binali Yildirim, the candidate of President Recep Tayyip Erdogan's Justice and Development Party, by about 13,000 votes to claim victory in the race to become Istanbul's mayor. The exceptionally narrow margin in a city of 15 million people gave Erdogan cover to demand an election rerun. On June 23, Istanbul voted again, and Imamoglu won again—this time by about 800,000 votes. It was a stunning rebuke for Erdogan, himself once Istanbul's mayor, and a clear signal that many in Turkey's largest city are fed up with the man who has dominated the country since 2003.

In the process, voters have proved once again that while Erdogan may continue to reach for Putin-like powers, Turkey is not Russia. It's a legitimate multiparty democracy with genuinely contested elections. After triggering the second vote, the President campaigned vigorously for his party's candidate and used his government's tight grip on Turkey's media to ensure favorable coverage. Despite that advantage, his demand for a do-over transformed a loss by 0.16% of the vote into a 9-percentage-point blowout.

Given that margin, Erdogan had little choice except to publicly acknowledge the result, but he's unlikely to truly accept such a stinging political defeat. Over many years in power, he has demonstrated an instinct for responding to political setbacks with a more emphatic power grab. In this case, he's likely to use the courts to strip powers from Istanbul's mayor's office and shift them to the central government. With a weak economy and contentious relations with the U.S., Erdogan is likely to double down on his confrontational nationalist agenda.

His greatest vulnerability comes from Turkey's feeble economy. During his first years in power, Erdogan earned credit for good economic times. Emboldened by this success, his party promised in 2012 that Turkey's per capita income would climb to $25,000 by 2023. The IMF estimates that 2018 per capita income stood at about $8,700. Turkey's gap between rich and poor is one of the widest in the world.

ERDOGAN WILL FACE two major potential challenges in coming months. First, an emboldened opposition and an assertive President may bring large numbers of protesters into the streets of Istanbul and other Turkish cities, particularly if Erdogan is seen as interfering with the city's government. In 2013, a demonstration that began with a few people protesting urban overdevelopment led to an Erdogan-ordered crackdown that resulted in injuries and deaths. Those Gezi Park protests became a national phenomenon, involving as many as 2.5 million people across 79 of the country's 81 provinces. Six years later, the conditions for a repeat of large-scale unrest—urban residents infuriated with an aggressive leader—remain.

The conditions for a repeat of large-scale unrest—urban residents infuriated with an aggressive leader—remain

Erdogan's more immediate worry comes from political challenges within his own party. The election embarrassment in Istanbul will encourage former Prime Minister Ahmet Davutoglu and former Deputy Prime Minister Ali Babacan to establish new political parties of their own, giving disillusioned supporters new options. Thanks in part to support from former President Abdullah Gul, Babacan is the candidate most likely to draw votes away from Erdogan.

Recep Tayyip Erdogan has proved himself over 16 years in power to be one of the world's most resilient and resourceful politicians, but now he is about to be truly tested—and Turkey with him. ◻

SPORTS

Let's (not) go to the videotape

When controversy over video replay overshadows soccer's top tournament, the beautiful game can get ugly fast. That's what's happening with VAR—video assistant referee, or soccer's instant replay—at the Women's World Cup in France. VAR's World Cup debut last summer, at the men's tournament, was deemed a success: some top men's pro leagues were already experimenting with VAR, so the players were familiar with it. FIFA, however, did not approve replay for the women's event until less than three months before kickoff, so the women couldn't benefit from advance preparation. What's more, a new rule dictating how goalkeepers stand before penalty shots was instituted just days before the Cup, and refs have used replays to nitpick its enforcement, going against VAR's stated intent to correct "serious missed incidents" and affecting the outcome of games. One coach accused FIFA of using the women as "guinea pigs." The disastrous VAR rollout is yet another example of the inferior treatment that women in global soccer receive.

—*Sean Gregory*

A ref signals for a video review in a U.S.-Spain match

ZHENG HUANSONG—XINHUA/SIPA USA

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The myths about the Mueller report that just won't die

By Barbara McQuade and Joyce White Vance

WHEN WE TESTIFIED BEFORE THE HOUSE JUDICIARY Committee in June regarding lessons from former special counsel Robert Mueller's investigation, it became apparent from the questioning that misconceptions about Mueller's findings still exist. The narrative was shaped by Attorney General William Barr, who issued his description of Mueller's conclusions more than three weeks before the public saw the full 448-page report. In a letter to Barr, Mueller complained that Barr's summary "did not fully capture the context, nature and substance" of his team's work and created "public confusion." Mueller will testify before Congress on July 17. In the meantime, here is our effort to dispel some of the most persistent myths.

MYTH: Mueller found "no collusion."
RESPONSE: Mueller spent almost 200 pages describing "numerous links between the Russian government and the Trump Campaign." He found that "a Russian entity carried out a social media campaign that favored presidential candidate Donald J. Trump." He also found that "a Russian intelligence service conducted computer-intrusion operations" against the Hillary Clinton campaign and released stolen documents. He wrote that the "investigation established that the Russian government perceived it would benefit from a Trump presidency and worked to secure that outcome, and that the Campaign expected it would benefit electorally from information stolen and released through Russian efforts."

674
Days it took special counsel Robert Mueller to complete his investigation

3
Days it took Attorney General William Barr to issue his principal conclusions about the report

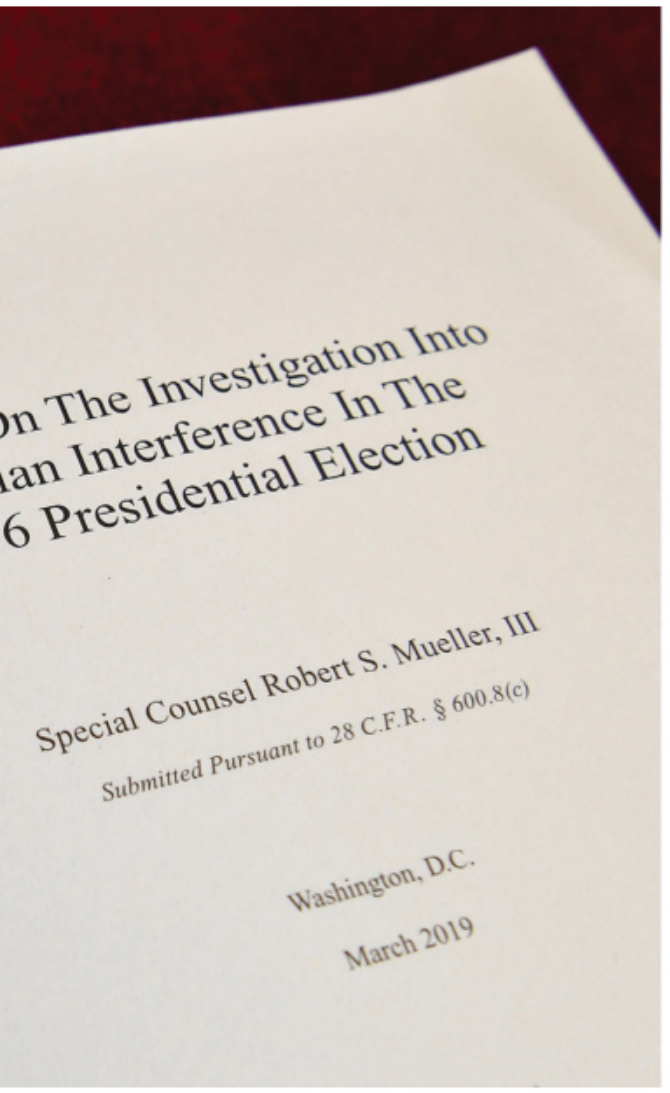
To find conspiracy, a prosecutor must establish beyond a reasonable doubt the elements of the crime: an agreement between at least two people to commit a criminal offense and an overt act in furtherance of that agreement. Mueller found that Trump campaign members Donald Trump Jr., Paul Manafort and Jared Kushner met with Russian nationals at Trump Tower in June 2016 for the purpose of receiving disparaging information about Clinton as part of "Russia and its government's support for Mr. Trump," according to an email arranging the meeting. This meeting did not amount to a criminal offense, in part, because Mueller was unable to establish "willfulness," that is, that the participants knew their conduct was illegal. Mueller was also unable to conclude that the information was a "thing of value" exceeding $25,000, the amount that makes a campaign-finance violation a felony.

Mueller found other contacts with Russia, such as the sharing of polling data about states where Trump later won upset victories and attempts to influence Russia's response to sanctions imposed by the U.S. government for election interference. While none of these acts amounted to the crime of conspiracy, all could be described as "collusion."

The investigation ended on March 22 when Mueller submitted his report

MYTH: Mueller found no obstruction.
RESPONSE: Mueller found at least four acts by Trump in which all elements of the obstruction statute were satisfied—attempting to fire Mueller, directing White House counsel Don McGahn to lie and create a false document about efforts to fire Mueller, attempting to limit the investigation to future elections and attempting to prevent Manafort from cooperating with the government. "As Mueller stated, "while this report does not conclude that the President committed a crime, it also does not exonerate him." Following the Department of Justice policy that a sitting President cannot be charged with a crime, Mueller did not attempt to reach a legal conclusion about the facts. Instead he undertook to "preserve the evidence when memories were fresh and documentary materials were available,"

MANDEL NGAN—AFP/GETTY IMAGES



because a President can be charged after he leaves office. In fact, Mueller thought it would be improper to even accuse Trump of committing a crime so as not to "preempt constitutional processes for addressing presidential misconduct," meaning impeachment.

MYTH: Case closed. No do-overs.

RESPONSE: Mueller investigated the case under criminal statutes, which is a narrow window of inquiry. Congress has a broader responsibility to determine whether the President committed high crimes and misdemeanors for which impeachment is appropriate.

MYTH: Focus on obstruction detracts from focus on Russia.

RESPONSE: Focusing on obstruction *is* focusing on Russia. Mueller concluded that Russia interfered in the 2016 election in "sweeping and systematic fashion." The report documents Trump's efforts to end or curtail the investigation, his refusal to be interviewed, and written answers that Mueller found "inadequate." It also notes that members of the campaign lied, refused to answer questions and deleted communications. Obstruction is a crime precisely because those who engage in it seek to keep investigators from arriving at the truth. As Mueller wrote in Volume I of the report, pertaining to conspiracy with Russia, "given these identified gaps, the Office cannot rule out the possibility that the unavailable information would shed additional light on (or cast in a new light) the events described in the report." Efforts to obstruct the investigation may have shielded not only the conduct of members of Trump's campaign, but also active measures by Russia to interfere with our election.

MYTH: If there was no underlying crime, there can be no obstruction of justice.

RESPONSE: Obstruction of justice includes not just completed acts but also attempts. Regardless of Trump's motive—perhaps to conceal his payments to silence Stormy Daniels, perhaps to avoid the appearance that his election was illegitimate because it was achieved with assistance from a foreign adversary—his efforts to interfere with Mueller's investigation legally amount to obstruction of justice, even under the narrow definition and high standard of proof Mueller used. Of course, crimes *were* charged against 37 individuals and entities, including more than two dozen Russian nationals.

MYTH: Because Trump was unsuccessful in ending the investigation, he couldn't have obstructed justice.

RESPONSE: The report finds substantial evidence that Trump asked McGahn to fire Mueller. McGahn said he was prepared to resign rather than comply. Because the law punishes attempts, Trump's effort to end the investigation constitutes obstruction of justice, even though McGahn did not follow through on the order. In addition, Mueller found that all elements of obstruction were satisfied with regard to Trump's efforts to limit the investigation to future elections: Trump directed then Attorney General Jeff Sessions to "unrecuse" himself from the investigation and to publicly announce that the investigation would focus only on future elections. If successful, this effort would have prevented us from learning the truth about Russia's efforts to attack the 2016 election.

MYTH: A President cannot obstruct justice as a matter of law when he is exercising executive power.

RESPONSE: Mueller found that this theory, advanced by Barr in an unsolicited 19-page memo before he became Attorney General, was inconsistent with the law, the Constitution and the foundational notion of separation of powers. The Constitution requires not just that the President execute the law, but also that he do so "faithfully." As Mueller and his team stated, subjecting the President to obstruction law is consistent with the principle of our government that "[n]o [person] in this country is so high that he is above the law." Even under Barr's theory, a President commits illegal obstruction when he engages in conduct that is outside his executive power, like directing a witness to create a false document, as Mueller found that Trump did with McGahn.

MYTH: Mueller wanted Barr to make the call on whether Trump committed obstruction.

RESPONSE: Mueller didn't invite Barr to make a decision about prosecuting obstruction. He left it to prosecutors who could decide whether to pursue charges after Trump left office and to Congress which has impeachment power. Barr's peremptory dismissal of obstruction happened with no explanation of how he was able to resolve the evidence of obstruction when Mueller could not. Since then, more than 1,000 former federal prosecutors, including us, have signed a letter stating that the evidence establishes multiple counts of obstruction of justice.

MYTH: The special counsel's name is pronounced "Mule-er."

RESPONSE: It's pronounced "Muller."

McQuade is a professor at the University of Michigan Law School and a former U.S. Attorney for the Eastern District of Michigan. Vance is a distinguished professor at the University of Alabama School of Law and a former U.S. Attorney for the Northern District of Alabama

CLEAR
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12°
FLOOD
AREA
Coded
Spoken
Tornado
TORNADO
Funnel Cloud
Waterspout
T+
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RAIN
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DRIZZLE
Norman
COUNTIES:

Weather Wars

IS FORECASTING A COMMON GOOD, OR A COMMODITY? BY ANDREW BLUM

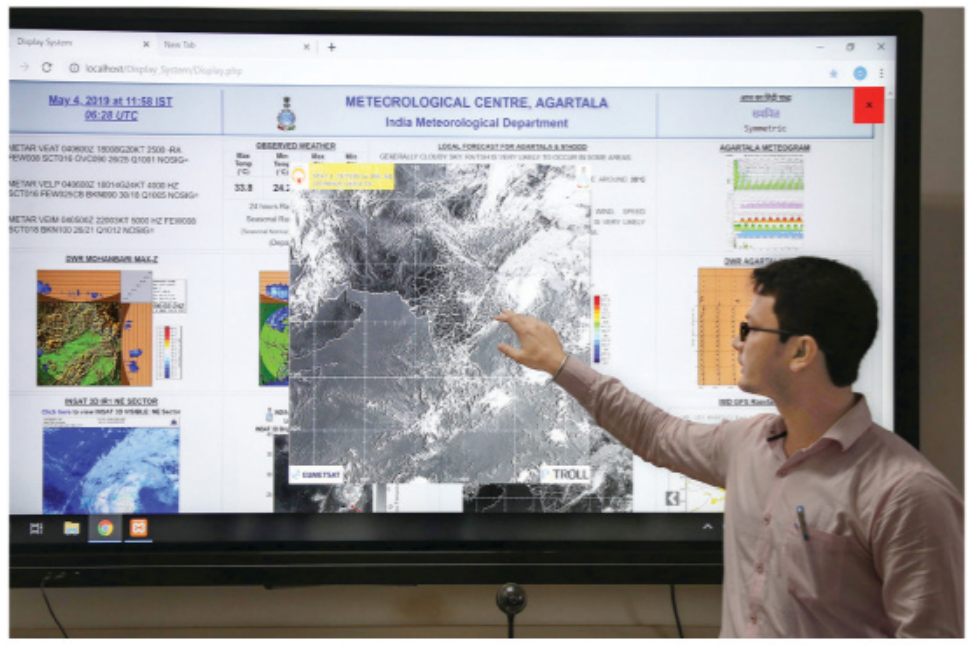
PAUL SAUER SPINS HIS HEAD LIKE A HAWK, STANDING ON THE ROOF OF the Marine Air Terminal at La Guardia Airport, as jets whine and fume on the tarmac below. "Pretty straightforward today," he shouts. "A little stratocumulus to the north. A little bit of middle clouds, which is still moving through us to the south. And a little bit of cirrus above that." He turns on his heels and heads back down to his office, one floor below. "The machine is not going to see that," he says. "The machine—well, we'll find out."

Out on the runway, near the edge of taxiway DD, "the machine"—a ceilometer—sits on a small patch of grass, burnt to brown by jet exhaust. It measures cloud cover, but only directly above the airport. Even if the thickest fog bank were rolling in from the west, over Manhattan, the ceilometer wouldn't register it until it arrived. That's where Sauer comes in. La Guardia is one of 135 airports around the U.S. with a human weather observer, there to back up a suite of instruments known as an Automated Surface Observing System, or ASOS. Sauer watches the weather, and he watches these machines that watch the weather. Once each hour—more often, in poor conditions—he runs up to the roof, looks at the sky and then checks what he sees against what the machines have registered. With a few keystrokes at an old terminal, he changes the numbers. Rather than a single layer of scattered clouds at 8,000 ft., he sees three. "I did not accept the output from the automated system because it was not completely accurate," he says. "I backed up the sky."

LA GUARDIA'S human eyes are more the exception than the rule—a failsafe for the airport's 83,000 daily passengers. The sensors on the runway are the headwaters of a rushing river of automatically collected data. The observations they collect join tens of millions of others, from satellites and radars, buoys and instrumented balloons, anemometers and thermometers alongside highways and protruding from the fuselages of airliners. They flow through a purpose-built telecommunications system and pool together at designated centers on each continent, where they are processed into

PHOTO-ILLUSTRATION BY ALEX WILLIAMSON FOR TIME

Environment



forecasts and analyses, and then sprayed back out to the world—to government weather services, morning radio hosts, airline dispatchers, military generals and the smartphone in your pocket.

This torrent of weather data is the result of a deliberate global collaboration dating back 150 years, energized by President John F. Kennedy and optimized only recently with advancements in satellites and supercomputers. It is one of the grand technological achievements of our age, an integrated system of systems—a coherent weather machine.

Today's weather forecast is a wonder we treat as a banality, a triumph of ingenuity and diplomacy we shrug off with an emoji. Its success at predicting the weather—and improving that prediction year by year—is astonishing. Meteorologists use the word *skill* to judge the accuracy of their predictions, and it has a specific definition: the measure of their ability to forecast the weather better than climatology, meaning the historical average for the place and date. If the average high temperature in New York on March 1 is 45°F, any forecast has to be right more often than those climatological averages to count as "skillful." Generally speaking, with each passing decade, meteorologists have been able to make that claim one day further into the future. That means a six-day forecast today is as good as a five-day forecast was a decade ago; a five-day forecast today is as good as a three-day forecast two decades ago; and today's six-day forecast is as good as a three-day forecast in the 1980s.

But its future is uncertain. In early June, representatives from 193 states and territories gathered in Geneva, as they do every four years, for the congress of the World Meteorological Organization (WMO), a specialized agency of the U.N. They were there to affirm the long-standing terms of this collaboration and work out new ones. In the era of Trump and Brexit, cloud computing and climate extremes, the stakes for the weather forecast have never been higher.

Our ability to see the future of the atmosphere now depends less on the day-to-day insights of any human and more on the year-by-year advancements in computer simulations. These weather models run on supercomputers operated by the elite of the world's government weather offices, but they serve everyone. "One of the great strengths of the WMO is that we work together as a community to bring the whole community along," says Sue Barrell, former vice president of the WMO Commission for Basic Systems and the recently retired chief scientist of Australia's Bureau of Meteorology. "That's how come we've got to the global modeling state that we have now."

KNOWING THE WEATHER FIRST WOULD BECOME A LUXURY

Countries around the world reap the benefits. Before Cyclone Fani struck India in May, authorities had enough warning—and faith in the forecast—to move a million people out of its path. (A similar storm in 1999 killed more than 10,000.) A near record-breaking barrage of tornadoes in the U.S. this spring was met with remarkably accurate predictions, both in the days leading up to likely outbreaks and in the minutes before a tornado actually formed. Even when two massive EF4 tornadoes buzzed through heavily populated areas in Ohio and Kansas, good warnings (and good luck) prevented all but one death. (A large tornado in Joplin, Mo., in 2011 killed 161 people.)

Today's scientific success—combined with new extreme weather that strikes more frequently—has brought heightened commercial interest. The forecast works better and matters more—to insurance companies preparing for disasters, wind-farm owners optimizing their turbines, airlines eager to save fuel, farmers planting crops or retailers marshaling stock. "The weather enterprise," as meteorologists call the private sector, sees opportunity. What remains to be seen is if they will further improve the forecast for everyone, or create a two-tiered system of those who can pay for better predictions and those who cannot.

ON AN AFTERNOON this spring, Neil Jacobs, acting administrator of the National Oceanic and Atmospheric Administration (NOAA)—the agency responsible for observing and predicting the weather—lays out his concerns in an office overlooking the Ellipse, just outside the White House. Fifteen or 20 years ago, Jacobs explains, the role of private companies was exclusively what's known as "value add": they would take the observations and forecasts produced by the National Weather Service and tailor or repackage them for specific customers, like airlines or power companies. But today, in what some scientists describe as the new "weather regime" of climate change, the stakes are higher—and the forecasting capabilities greater. "Now you've got companies running their own models, deploying their own observing systems," says Jacobs.

Spire, a San Francisco–founded startup, is selling the weather observations it collects from a fleet of over a hundred tiny satellites. ClimaCell, another startup, based in Boulder, Colo., Boston and Tel Aviv, has begun extracting proprietary weather data from new sources, like cellular transmission signals, and feeding them into its own forecasting system. "If everything is sensitive to weather, we can

FROM LEFT: STR/AFP/GETTY IMAGES; STR/AP

From left: Indian scientist Sanjay Sarma monitors Cyclone Fani on May 4; damage on the country's east coast after the storm hit

turn everything into a weather sensor," says Shimon Elkabetz, ClimaCell's co-founder. Earlier this year, IBM—which purchased the Weather Company, formerly the Weather Channel, in 2016—announced its own global weather model capable of bringing precise storm forecasting to parts of the world, like Africa and South America, that before had to make do with more general predictions. It will be aided by 80 million observations a day already collected from barometers in smartphones (yes, they're in there). Each company is banking on potential customers' seeing their weather observations and forecasts not as a common good but as a commodity, capable of giving them an edge over the freely available government outlooks. The market sees money to be made in reducing the forecast's uncertainty and responding proactively to extreme events—or just a rainy weekend. Economic damage from severe weather reached $306 billion in 2017. And a NOAA report last year estimated that weather-related variables had swung the nation's GDP by 3.4%.

"There's a big disparity there," Jacobs points out. "That's just prime opportunity for somebody to close that gap." He adds, "We're sort of at this paradigm shift right now, where private industry is there—they're capable. Now we have to figure out how to harness what they're doing, while not simultaneously negatively impacting their business model."

His concern for the needs of industry tracks with the Trump Administration's interest in prioritizing the role of the private sector in weather forecasts. Before joining NOAA in 2018, Jacobs worked in the weather-forecasting division of Panasonic, the electronics company, developing a proprietary weather model. He is only NOAA's acting administrator. The man nominated to replace him, Barry Myers, has been a lightning rod for critics. In his former role as the CEO of AccuWeather, Myers argued for new limits on what weather information the National Weather Service could release, leaving companies like his own with more control over the forecast, and greater profits. His appointment awaits a vote in the Senate.

The Trump Administration would apply its industry-first approach to the entire international meteorological community. This spring, Louis Uccellini, the longtime director of the National Weather Service, campaigned for the presidency of the WMO—a move perceived by WMO members as not only a bid for American influence but a threat to the current government-operated system that covers the whole planet and serves the whole planet. Uccellini lost, to the director of the German weather service, Gerhard Adrian, a victory that prompted the Twitter account of the German Mission to Geneva to declare "#MultilateralismMatters."

"From the very beginning of WMO—and this started in 1873—it was always that if you would like to participate in this system, you would provide your data free and unrestricted, and without any financial benefit," says Tillmann Mohr, a special adviser to the WMO and former director of the German weather service and the European meteorological satellite agency. The entire global forecasting apparatus depends on this free exchange of data. The nightmare scenario is if that exchange stopped—if, for example, the U.S. stopped sharing the satellite data it acquired from a commercial company. "If every nation took a position that we're going to have to buy all this stuff in the private sector multiple times over—because that's essentially what the private sector would like—that would be the end of WMO," says David Grimes, the outgoing WMO president and director of Canada's weather service. The impact on the forecast would be felt immediately. "It would take three days before the United States would realize that they couldn't live in a vacuum," Grimes says.

But NOAA's Jacobs worries that if the WMO doesn't make it easier for private companies to profitably sell their data, they will view the public sector as a competitor rather than a customer. If that happens, proprietary weather models will benefit while public models will be left behind. "There's nothing preventing them from going to these commercial observing system data providers and offering them an exclusive not to sell the data to government agencies," Jacobs says. "Then you find yourself in a scenario where the best forecast on the planet is actually for purchase, and you're separating the haves and have-nots when it comes to life and property."

From the perspective of many in the WMO, this would itself be a major setback—or at least the ceding of their long-held goal. "We have what we call a 'public-good mandate,'" says Grimes. "We're trying to get people out of harm's way." Private weather companies "look at the same data but through a different lens," he adds. "Their perspective is: This is a commodity.

Environment

Myers at a confirmation hearing in 2017

MARK WILSON—GETTY IMAGES

This is something that can be monetized." Jacobs' concern for the profitability of private weather companies, Grimes says, "might be a made-in-America point of view."

Key leaders in the private sector remain eager to work within the existing system of collaboration and shared data. "There is an evolution that continues to take place in the global weather enterprise," says Kevin Petty, director of science and forecast operations and public-private partnerships at IBM's Weather Company. "But at the same time, I want to reiterate the importance of what our national meteorological services around the world do and that kind of traditional flow of data. We shouldn't, all of a sudden, run away from the way we've always done that."

It would jeopardize the weather forecast when it's needed more than ever. If the existing exchange of global data stopped, everyone's forecasts would suffer. If the skill of private forecasts exceeded public ones, knowing the weather first would become a luxury—giving those willing to pay a head start on evacuating ahead of a storm or preparing for its impacts.

But must public forecasts suffer for private forecasts to succeed? Or can advancements in the private sector benefit public forecasts as well? The remarkable thing about meteorology is how long it has hewed to its origins as a global public good. The challenge for this new era—of both weather and technology—will be to use innovation to improve the system technically without degrading it socially. "There's a social injustice with extreme events," says Grimes. "They attack the most vulnerable. Governments, no matter where they are, feel the obligation to step up. They have a social responsibility to care for their people."

In a speech to the U.N. in September 1961, President Kennedy used the aspiration of global weather observation to redirect Cold War tensions away from a missile race and toward more productive scientific endeavors. "Today, every inhabitant of this planet must contemplate the day when this planet may no longer be habitable," he said. But weather could be a realm of "cooperative efforts between all nations." The threat today is climatic—not nuclear. But Kennedy saw that we live on a planet carved up by borders yet encased in a borderless atmosphere. We still do.

Adapted from The Weather Machine: A Journey Inside the Forecast *by Andrew Blum. Reprinted with permission of Ecco/HarperCollins Publishers*

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World

GAUDÍ'S GREAT TEMPLE

The race to complete the late architect's unfinished masterpiece, 137 years on

By Lisa Abend/ Barcelona

PHOTOGRAPHS BY LUCA LOCATELLI FOR TIME

A stone panel is lifted during construction on the Sagrada Familia's Jesus tower; when completed, it will be the tallest structure in town

World

Visitors gather inside the Sagrada Familia's nave in March; it was consecrated by Pope Benedict in 2010

CLIPPED TO THE END OF A GIANT RED crane, the 25-ton panel—a marvel of stone and steel—begins its slow ascent. For the tourists gawking from the Barcelona street below, it's an astonishing sight, this massive, chiseled slab dangling from a cord as it rises up the side of one of the world's best known monuments. But it's even more amazing for Jaume Oromí. As one of the heads of construction for the Sagrada Familia, Oromí has watched for months as, piece by piece, the towers that will one day remake the Barcelona skyline gradually rise into the heavens. "This is always the moment of maximum tension," he says, gesturing to the panel as it sways 100 ft. above his head. "Intellectually, you know how it works, but there's still something about getting that many tons in the air that seems miraculous."

The same could be said for the Sagrada Familia as a whole. More than 130 years after the first stone was laid—and with the proper building permits finally in place—the end is in sight for the Barcelona basilica. Thanks to an influx of funding, some striking innovations and a lot of old-fashioned craftsmanship, the famously unfinished church is now on schedule to be completed in 2026, the 100th anniversary of the death of its architect, Antoni Gaudí. Today, more than two dozen architects are working on the project—most of them local Catalans—and 200 workers in total are involved in construction. But making the deadline will mean overcoming technical complications, theological doubts and several blocks' worth of outraged residents.

At a time when Barcelona is grappling with an unprecedented tourist influx that is challenging the idea of what the city should be, the plans for the church risk deepening social and political divisions. And just like the reconstruction of Notre Dame in Paris, the project to finish the Sagrada Familia has triggered impassioned debates over the proper role of iconic historical buildings in a modern city.

But perhaps the greatest test will be determining its visionary creator's intentions. "Gaudí left us the path," says Jordi Faulí, the head architect now charged with the formidable task of completing a church that will have taken more than seven times as long to build as the great pyramid at Giza. "Sometimes, though, we've had to work hard to find it."

WHEN GAUDÍ DIED suddenly at the age of 73, struck down by a tram on a busy Barcelona street in 1926, the architect had been working on the Templo Expiatorio de la Sagrada Familia for 43 years. A religious organization hired the diocesan architect, Francisco de Paula del Villar, to build what was originally planned as a typical neo-Gothic church. But when Villar resigned a year after construction began, the project passed to Gaudí. Although he would go on to build several of Barcelona's most iconic structures, including La Pedrera and Parc Güell, at the time, he had little more than a few lampposts and a shrine to his name.

It didn't take him long, however, to transform the Sagrada Familia's original plans into an extraordinarily ambitious undertaking: a structure that would combine natural forms and Christian symbolism into a temple that, as Faulí puts it, "expressed meaning not only through the sculpture and other decorations but through the architecture itself." Gaudí was not a practicing Catholic when he received the assignment. But he became increasingly devout as he worked on it, eventually coming to see the very structure as a vehicle for Christian evangelism.

"My client," Gaudí reportedly said, "is not in a hurry." Aware that the Sagrada Familia would never be finished in his lifetime, he left extensive drawings and models for a building that, when complete, would fill an entire city block. He insisted on completing the Nativity entrance—even though there was not yet a nave to enter into—because he knew it would serve as a kind of inspirational advert for what was to come. He did not quite achieve the goal: that facade would not be finished until 1936. Otherwise, only the crypt, the apse's facade and a single tower were complete at the time of his death. Everything else, including the remaining 17 towers and the central nave, remained undone.

For a long time, it stayed that way. During Spain's 1936–39 civil war, construction stopped, and much of Gaudí's preparatory work was destroyed. Even once it resumed, there were long stretches from the 1940s through the 1990s when insufficient funds—construction depended entirely on private donations—slowed or halted altogether the work. When Faulí joined the team as a junior

A prefabricated panel is moved from an enormous work site in Galera to Barcelona, about 90 minutes away

architect in 1990, only three of the interior's 56 columns (each one tied, in typical Gaudí fashion, to the liturgical calendar) and a handful of the windows had been completed.

But that was before the miracle of modern tourism. Although many in Barcelona would eventually see them as a curse, the millions of travelers who began flooding the city at the start of the new century meant salvation for the Sagrada Familia. As the number of visitors rose—the church currently gets roughly 4 million per year, and each one pays an entry fee that ranges from $16 to $43—the foundation overseeing the basilica found itself in the unfamiliar position of having enough money to finish the main nave. A soaring expanse with treelike pillars and multicolored stained-glass windows that make it feel like a kaleidoscopic forest, the nave was consecrated by Pope Benedict in 2010.

In the process of completing the interior, the architects realized something else wondrous: Gaudí, a master of pure geometry, had designed the entire complex using just two key forms: a hyperboloid (which can look like a 3-D hourglass) and a paraboloid (akin to a Pringles potato chip). Composed of straight lines

About 400 panels have been built at Galera, transported to Barcelona and hoisted atop the Sagrada Familia

(thereby making them easier to build) but creating curves (and enabling the naturalistic shapes Gaudí adored), the two structures were a sort of blueprint for the basilica's different elements.

"It was like learning a new language—we weren't just learning the vocabulary, but the grammar as well," says Faulí. "Once we learned to form these shapes and combine them with each other, it was just a matter of following the rules he had laid out and applying them to new columns, new vaults."

As the know-how and financing fell into place, the foundation began to study what it would take to actually finish the church. Which is how British structural engineer Tristram Carfrae, the deputy chairman of Arup, the design and engineering firm that built the Sydney Opera House, found himself walking out of a meeting in 2014 with the Sagrada Familia foundation and thinking, "Did that really happen? Do we really have the opportunity to work on the most fantastic project in the world?"

They did. But they still had to build 10 more towers, among them the 564-ft. Jesus tower, which would be the tallest structure in town. There were other daunting questions. "How do we speed up the rate of construction by a factor of 10 so that we can complete this by 2026?" Carfrae reels off. "How do we account for the fact that as you complete the church, the available area on site for assembling things diminishes? And finally, how do we do all that with the quality that the church deserves and Gaudí's vision demands?"

Part of the answer lies at Galera, a sprawling work site 90 minutes north of Barcelona, where twin cranes rise like latter-day monoliths over the hills. Like each of the 50 or so workers there, Valentí Anglès has a very specific job: he uses a small, motorized crane to slide multikilo "anchor" blocks onto an interlocking row of granite stones that will be fixed to a steel plate and bound together into panels. Because the anchor blocks have holes through which steel rods will be inserted, Anglès can only afford an exceedingly tiny margin of error. "If I miss it by a millimeter or two," he says, "we have to break the whole thing and start over." The panels that Anglès helps build are Arup's solution to the complex problem of building the Sagrada Familia's towers. To make them light enough, the engineers could have built a steel frame and clad its surface with stone. "That didn't fit with our notion of quality—from the inside it would have looked like a Hollywood set," says Carfrae. Instead, they make the panels entirely of stone—albeit blocks only 300 mm thick, rather than a cathedral's more typical 1 or 2 m.

That the panels can be prefabricated off-site matters too. There are masonry and carpentry workshops on the grounds of the Sagrada Familia itself, but the craftspeople there tend to work on the smaller decorative elements, since they lack the space to put together a single 6-m stone panel. But with 900 panels in all to make for the Jesus, Mary and four evangelist towers, even the Galera site isn't big enough to hold everything at once.

That's why the Sagrada Familia has adopted a model that would be familiar to anyone who grew up in Detroit. The key

From their studio inside one of the Sagrada Familia's spires, architects oversee every aspect of the design

components of stone (which come from different quarries around the world in an effort to match the polychrome stone that, in Gaudí's time, came from Barcelona's own Montjuïc hill, on its southern edge) and steel are prepared elsewhere. In northwestern Spain, for example, blocks of stone are precision-cut by computer, before a guy with a massive hammer slams the surface to create the textured exterior. "There's a symbiosis of high-tech and traditional artisanship in every component," says Fernando Villa, the Sagrada Familia's director of operations. "The process of bringing them together is modeled on an automobile assembly line. Everything is done just in time."

SO FAR, about 400 of the panels have been completed, loaded onto a truck bound for Barcelona and hoisted into place on the Sagrada Familia's ever evolving roof. But if the technical challenges have been largely resolved, the social and political ones are proving a bit thornier.

When work first began on the Sagrada Familia, the temple was surrounded by empty land that had not yet been incorporated into Barcelona. That led Gaudí to design the temple's main facade, dedicated to the glory of God, with a huge narthex that would extend from the southern terminus of the nave down a grand staircase to a park below. But today, the busy Calle Mallorca runs through the planned portico, and apartment buildings stand where the staircase and park are meant to go.

The city government had not yet taken a stand on how to resolve the issue, largely because it's been too busy figuring out how to get the construction itself legalized. "It was always rumored that Sagrada Familia had never registered for the proper building permits," says Janet Sanz, deputy mayor for the environment, urban planning and transportation. "When I took office, I asked my team to look into it, and we saw that for more than 130 years, they had been building without a license."

That finally changed on June 7. Sanz made a point of requiring the foundation not only to acquire the proper permits, but also to compensate the city for the effects of a century's construction. The Sagrada Familia's own board seemed eager to rectify the situation as well, and, in addition to acquiring the permits and paying construction taxes amounting to €4.6 million, they agreed to pay an additional €36 million over the next decade to cover the costs of everything from security to building a metro entrance that directs tourists into the church, rather than aboveground.

But the agreement doesn't address the facade-size elephant in the room. "I know that Sagrada Familia would like it if we kicked everybody out and razed the buildings on Calle Mallorca," says Sanz. "But it's not that simple. We're already in moment of tourist saturation. How do we guarantee that the neighborhood isn't converted into one giant souvenir stand? How do we keep traffic flowing? And when we already have a shortage, is destroying more housing the best solution?"

Both parties seem content to kick the decision down the road. Which is why every month, 150 or so residents—of the estimated 3,000 who could be evicted—march along the southern edge of the church bearing placards showing apart-

ment buildings being squashed beneath a foot adorned with the same silhouette going up 100 m above their heads. "I don't consider the church the enemy," says Salvador Barroso, spokesperson for the protesters. "It's their property, and they can dance folkdances in it for all I care. But when it encroaches on my property, what am I supposed to do?" Like many of his neighbors, he blames the city government for failing to protect residents, and wants either a guarantee that he can stay in his apartment or fair compensation for moving. So far, neither is on the table.

Head architect Faulí is quick to emphasize that neither the staircase nor the surrounding green space is included in the 2026 deadline. "That," he says with a gentle smile, "will be another phase." So too will the decoration of the Glory facade, which Gaudí refrained from detailing. "How do you represent the Eternal Glory?" asks Faulí. "We know from his model that it will have four towers and 16 immense lanterns over the entry. And we know that Gaudí was near the end of his own life, so we can intuit mystical elements, the glimpse of God. But figuring out what he intended for that, yes, sometimes that keeps me up at night."

For Faulí, who like many on the construction team is a deeply religious man, the role of determining Gaudí's vision is daunting. But he also finds profound meaning in the work. "Somehow, Sagrada Familia lifts everyone so that they bring their best to it. It's transcendent."

One day in the near future, the final panel will be lifted into place and the Jesus tower topped with a five-pointed illuminated star. Ascending via elevator and then a final staircase, the visitor will be able to see Barcelona stretching below, its wide boulevards leading to the mountains in one direction and the sparkling Mediterranean in the other. For Jaume Oromí, the view from the platform where he oversees construction never ceases to make him feel closer to God. But what really moves him is to stand alone in the nave at night, after all the tourists have left, and to put a hand on one of those extraordinary columns that Gaudí designed. "Then you can feel it," he says. "It speaks to you." ◻

For more videos and photos, visit
time.com/sagrada-familia-barcelona

A panel is lifted by crane near the top of the Sagrada Familia, ready to fit perfectly into position, in March

Sarah Salazar survived a mass shooting, but an X-ray shows the shotgun pellets still in her body

THE POISON IN THEIR BLO

They survived mass shootings, but the bullets could still kill them

By Melissa Chan

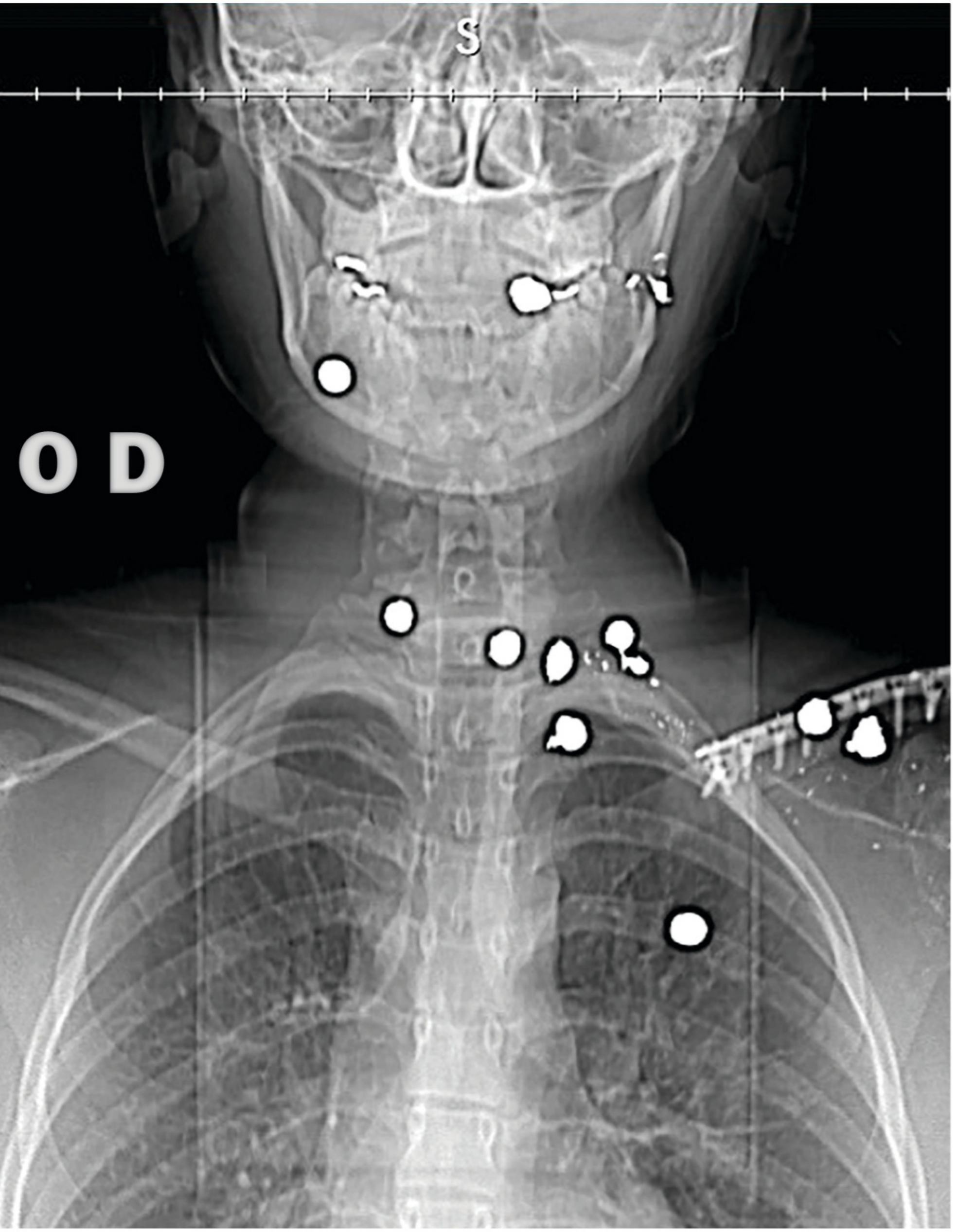
COLIN GODDARD LAY IN A POOL OF HIS OWN BLOOD, HOPING HIS racing heart would not tip off the approaching gunman that he was still alive. The shooter hovered over Goddard, paused and fired two more bullets into him anyway.

Goddard survived the April 16, 2007, massacre at Virginia Tech, which killed 32 people and was the worst school shooting in U.S. history. Twelve years later, he tries not to dwell on the day, but he has dozens of constant reminders: bullet fragments lodged in his body, leaching toxins into his blood.

Like hundreds and possibly thousands of shooting survivors across the country, Goddard, a 33-year-old father of two, is suffering a lesser-known side effect of gun violence: lead poisoning. When he was shot in his French class that spring day, three bullets shattered when they hit his hips and left knee. Because the fragments did not pose life-threatening risks, trauma surgeons left them in his body—a common and widely accepted practice in emergency rooms. Now, with his blood lead levels seven times higher than what is considered safe, Goddard faces long-term health risks, including neurological problems, kidney dysfunction and reproductive issues.

The metal's toxicity is well documented, but only wildlife have benefited from efforts to outlaw its use in bullets. California in July will become the first state to ban lead hunting bullets, the culmination of a years-long battle that pitted environmentalists against the National Rifle Association (NRA) and other gun-rights groups.

"I was told, 'You're going to be fine in the long term,' and that's not right," Goddard says. "It throws you back when you realize you're not out of the woods yet, and this terrible day is not entirely behind you."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WITH ROUGHLY 80,500 nonfatal gunshot injuries annually, a vast number of Americans every year experience a version of Goddard's worst day, according to the U.S. Centers for Disease Control and Prevention (CDC). "Doctors think we solved the lead problem because we took lead out of paint and we took lead out of gas," Goddard says. "But we still have these very acute, very severe problems within a big population of the country—a population that's already been victimized in a significant way."

In 2017, the CDC released its first report linking lead toxicity to bullet fragments, which said at least 457 adult shooting survivors tested positive for elevated blood lead levels from retained bullet fragments between 2003 and 2012. Its main source of data was the Adult Blood Lead Epidemiology and Surveillance (ABLES) program, which requires labs and health care providers in 41 participating states to report blood lead–level test results to their respective health departments. The program requires states to specify the sources of lead exposure, but many did not comply. That made it impossible to measure the magnitude of the issue, and the true tally was likely far higher than 457, says CDC epidemiologist Debora Weiss, the report's lead author.

It's even harder to collect such data today. The federal government eliminated the program's funding in 2013. When it restored funding in 2015, only 26 states were part of the program, according to the CDC. There is no evidence the exposure has slowed. In at least 12 ABLES states that track lead-exposure sources, roughly 300 people tested positive for elevated lead levels from retained bullet fragments from 2012 to 2018, according to data obtained by TIME.

"There's clearly sufficient research that substantiates cause for concern. There's no doubt about that," says Donald Smith, a professor of toxicology at the University of California, Santa Cruz, whose research team helped the state ban the use of lead ammunition by hunters. While studying the effects of lead toxicity in California condors—one of the world's largest birds threatened with extinction—the researchers found the creatures were dying in droves or being severely sickened from lead poisoning, primarily by eating the carcasses of animals that had been shot with lead ammunition, but also by being shot with lead bullets themselves. "Take it from the condors," Smith says. "Embedded lead from ammunition poses significant toxic concerns."

Lead has long been the metal of choice in many industries, including ammunition, because it's common and inexpensive, says Michael Helms, a firearms historian in Baton Rouge, La. It's also heavy and dense, Helms says, which helps bullets maintain consistent trajectories as opposed to those made with copper. This ensures maximum damage when a target is hit. Of the 9 billion ammunition rounds produced in the U.S. or imported into the country each year, 95% contain lead, according to the National Shooting Sports Foundation, a gun trade group. "If you have the misfortune of being shot," says former U.S. Environmental Protection Agency toxicologist Mark Maddaloni, "the bullet is probably going to be made of lead." Yet when it comes to the effects of lead from retained bullets, much is shrouded in mystery.

That's partly because it's difficult to detect. Lead poisoning's symptoms—fatigue, headaches, abdominal pain, nausea—are often mistaken for common illnesses. "It's really difficult sometimes for physicians who are treating these patients years after they've been shot to diagnose and figure out exactly what the problem is," says Jennifer Cone, a trauma surgeon who frequently operates on gunshot victims in Chicago. "If somebody has these symptoms, it's much more common for them to have menstrual cramps or a virus." If not treated, extremely high lead levels can cause death.

IN FEBRUARY 2017, Goddard was a new father and a grad student at the University of Maryland, so he dismissed his fatigue as a by-product of his busy life. But after his mother read the CDC's report, she emailed him to suggest he get his blood tested. "I think it's a good precaution," she wrote, "but I wouldn't worry at this point."

Goddard survived the Virginia Tech shooting but now suffers lead poisoning

"Gulp," he replied. "Will call the Health Center to determine options."

Tests showed his blood lead level was 37 micrograms per deciliter. On average, a healthy adult has a blood lead level of 2 micrograms per deciliter, according to Maddaloni, the former EPA toxicologist. While the World Health Organization says no level of lead exposure is considered safe, the CDC recommends taking action when levels are above 5 micrograms per deciliter.

Goddard underwent surgery later that year to remove some bullet fragments, which slightly decreased his blood lead levels. While toxicologists insist the remaining 50 or more pieces need to come out, doctors say it's too dangerous to remove them. Now, the business-development director in Bethesda, Md., has to swallow 31 pills a day as part of his chelation treatment, a chemical process to rid the body of excess or toxic metals. The treatment works only if he takes the pills. If he stops, the lead levels rise again.

"It feels like you're a frog in boiling water. You don't know these small changes in you until it's too late," says Goddard.

UNLESS BULLET FRAGMENTS pose an immediate danger—if they are near a major organ, for example—or have surfaced near the skin and are easy to remove, surgeons leave them in. Of the roughly 1,000 gunshot victims treated every year at the University of Chicago Medicine alone, up to 75% walk out with bullets still in their bodies, according to Cone, the trauma surgeon. And at SSM Health Saint Louis University Hospital in St. Louis—which, according to FBI statistics, has the highest murder rate among major cities in the nation—up to 75% of the roughly 450 annual gunshot victims leave with retained bullet fragments, says trauma surgeon Carl Freeman. "Oftentimes going in to get the bullet causes more harm than good," says Cone. "We cut through healthy tissue, blood vessel and nerves, and it can cause a lot of scarring or other issues down the road."

Often, the body will naturally form a protective barrier of scar tissue around a bullet or fragment, resulting in little to no damage, Cone says. "In the past, it's been thought that these bullets are completely benign," she adds. But sometimes, as years pass, the fragments dissolve and enter the bloodstream, causing lead poisoning.

Surgeons couldn't remove the shrapnel embedded in Morgan Workman's left leg after she was blasted with an assault-style rifle during Sunday services at the First Baptist Church in Sutherland Springs, Texas. The fragments, small as sawdust, look like purple freckles on her calf—a permanent mark from the rampage on Nov. 5, 2017, that killed 26 fellow congregants, including six close friends. "To remove it all," Workman says of the shrapnel, "they basically would have had to tear my leg apart."

Compared with others, her injury was minor, Workman says, and she was back to work within weeks, but she suddenly started losing control of both feet. It wasn't until almost a year later that Workman learned her blood lead level was 10 micrograms per deciliter, which was triggering a condition known as foot drop. The 21-year-old from La Vernia, Texas, now wears braces on both feet, even after chelation has lowered her blood lead level to 2 micrograms per deciliter.

In the aftermath of the tragedy, Workman says no medical professionals advised her to get tested for lead toxicity. Now, she and her family want to save other shooting survivors from the uncertainty that plagued her. So in December 2018, Workman's mother-in-law Julie Workman, a nurse who also survived the massacre, traveled some 200 miles to Santa Fe, Texas, to warn the victims of another mass shooting about the dangers of lead bullets.

One of them was Sarah Salazar, 17, who survived the shooting at Santa Fe High School that killed 10 people on May 18, 2018. Sarah was shot three times, leaving her with shotgun pellets embedded in multiple parts of her body, including her left lung and around her spinal cord. Sarah complained of headaches, fatigue and light-headedness, but it never occurred to her mother Sonia Lopez that Sarah could have lead poisoning.

Heeding Workman's warning, Lopez, 53, demanded that doctors test Sarah's blood. They found she had a blood lead level of 21 micrograms per deciliter. On April 12, Sarah had six of the roughly 20 pellets surgically removed and started chelation. A month later, her blood lead level was still at 15, and doctors are considering more invasive surgery in the chest and lung. "She just feels sick all the time," Lopez says of her once active daughter.

THE GOVERNMENT LAST REGULATED lead ammunition in 1991, when the U.S. Fish and Wildlife Service outlawed its use in hunting migratory waterfowl. Conservationists have been pushing the U.S. to expand restrictions to other species, but they have faced opposition from gun-rights advocates. In 2017, when President Barack Obama's Administration banned lead ammunition on federal wildlife refuges, the NRA criticized the move as an "attack on our hunting heritage." The ban was reversed when President Donald Trump took office. "It is a losing battle in the Trump Administration," says Jonathan Evans, senior attorney at the Center for Biological Diversity. Now, conservationists are focused on changing state laws. More than 30 states have rules on lead hunting ammunition, according to the Humane Society, but none is as strict as California's. "We know it can be done," says Evans.

'You don't know these changes ... until it's too late.'

—COLIN GODDARD

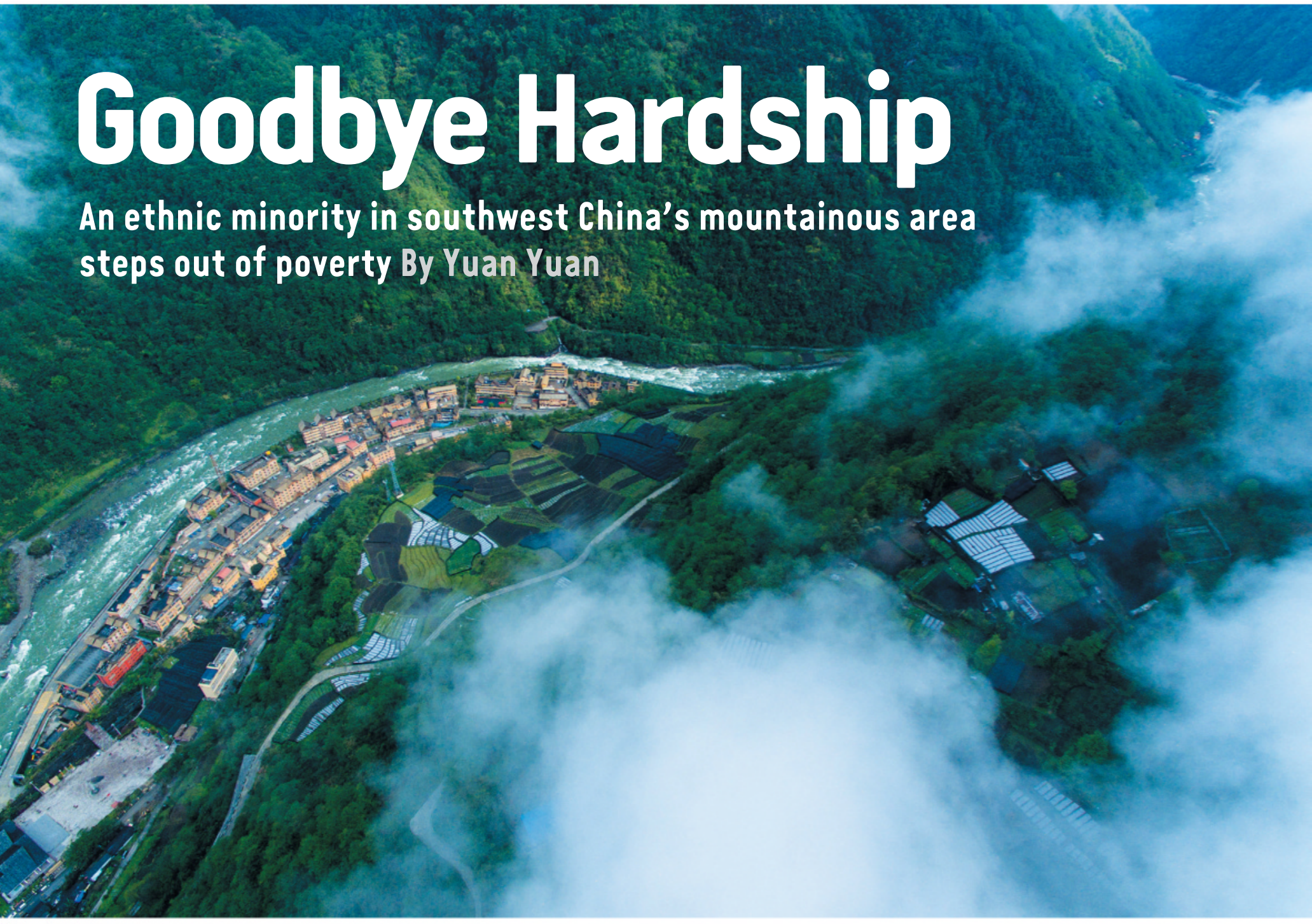
For animals, maybe, but not necessarily for humans. "We're not doing enough for them," says Ikenna Okereke, the University of Texas Medical Branch's chief of thoracic surgery, who is treating Sarah Salazar. "It's a huge problem, and I'm seeing it more and more. And if I'm just one physician seeing it more and more, it's just the tip of the iceberg." ◻

PREVIOUS SPREAD: UNIVERSITY OF TEXAS MEDICAL BRANCH; GODDARD: BRYAN THOMAS FOR TIME

Goodbye Hardship

An ethnic minority in southwest China's mountainous area steps out of poverty

By Yuan Yuan



An aerial view of Dulongjiang Township in Gongshan Dulong-Nu Autonomous County, southwest China's Yunnan Province, on April 18 (XINHUA)

Flanked by snow-capped mountains bordering Myanmar in southwest China's Yunnan Province, Dulongjiang Township, named after the Dulong River that winds through it, used to be one of the poorest areas in China. The township is home to people of the Derung ethnic group, one of the ethnic minorities in China that has the smallest population.

Before the founding of the People's Republic of China (PRC) in 1949, the Derung people still lived an insulated and primitive life. It was not until 1999 that a road was built linking the area to the outside world, making it the last township in China to be connected by road. Access to the township was still blocked by snow for almost six months a year until a tunnel was completed in 2014.

Yunnan, which borders Myanmar, Laos and Viet Nam, has 25 ethnic minorities. The vast mountainous areas in the province have been identified as a major target for the government's poverty alleviation. One of the smallest and most isolated minorities, with less than 7,000 people, the Derung ethnic group shook off poverty in 2018.

Paving the way

"The life of the Derung people in recent years has changed dramatically," said Gao, 65, former head of Dulongjiang Township, a key figure in leading local people out of poverty.

After graduating from a normal school in Nujiang Lisu Autonomous Prefecture, Gao returned to his hometown. In 1984, he started to serve in the township government with the ambition of lifting the local people out of poverty.

By then, there were no roads, no regular schools and no businesses in the township. The rolling hills and harsh climate made it difficult to even build a road. School-aged children would have to slide along a steel wire above the roaring Dulong River to get to county schools. Landslides, avalanches, wild animal attacks and traffic accidents made life extremely harsh.

Under such harsh conditions, Gao started to explore methods to increase local income.

He made ecological protection a top priority. "A well-preserved ecological environment is the great treasure passed down to us by our ancestors," Gao said. "We will spare no efforts to protect it."

Eventually, he found a way to bring both economic benefits to the locals and do no harm to the environment: They started planting amomum tsao-ko, a spice and medicinal herb, which is well-suited for the local climate.

Gao set up a base offering free training to the townspeople and in order to encourage more of them to learn the process, he also provided free accommodations and meals.

This created a sharp rise in locals' income. So far, there are more than 4,000 hectares of amomum tsao-ko farmland in Dulongjiang.

"The market for amomum tsao-ko has been growing in recent years, which has led to a boom in locals getting involved in the business," said Zhang Jun, Deputy Director of

the Publicity Department of Gongshan. "In addition, we have developed planting of paridis, another medical herb, and beekeeping, along with cow and chicken breeding, which have all greatly expanded locals' income sources."

Zhang said that in 2018, the average income of local people was 6,122 yuan ($900), an increase of 23.5 percent from 2017. Amomum tsao-ko alone brought in 7.43 million yuan ($1.09 million).

Furthermore, the forestry department in Nujiang Lisu Autonomous Prefecture, to which Dulongjiang is subordinated, has made all the people from 195 impoverished Derung households ecological rangers, providing them with an income for protecting the forests in their native land.

In the process, various levels of government support has offered a boost. In 2010, the provincial government implemented entire village advancement projects as well as pilot projects for the improvement of entire townships, with Dulongjiang included. Financial aid and related programs from the government put the town's development on a fast track.

Promising future

As a result, Dulongjiang now has a brand new look. Many new houses have been erected along the road, as residents living in uninhabitable conditions have been relocated to new houses. The 4G network covers the entire township and is accessible to quite a few delivery service providers.

In the early 2000s, a school covering six years of elementary and three years of secondary education was set up in the township. Children don't have to slide along a wire to attend schools further away anymore.

Moreover, the improvement in transportation has brought tourists to the township, leading some local people to renovate their houses into restaurants and inns to increase their income.

Tang Xiaocong, a 28-year-old local, runs a restaurant with his wife in Maku Village of the township. Their average income each month is about 6,000 yuan ($882).

"We were relocated three times before we settled down in Maku," Tang said. "The houses we lived in before were made of either bamboo or wood. They were freezing in winter and leaked when it rained. Our house now is built of bricks and is steady and firm with three bedrooms and a spacious kitchen."

Tang received his education outside Dulongjiang and served in the army for several years before returning to his hometown. These experiences broadened his horizons. In 2014, he came back to his village and opened up a restaurant.

"It has not been just the road and tunnel that have connected the township with the outside world," Tang said. "The 4G network has also linked it up. A growing number of locals are selling their agricultural products on online business platforms."

Tang Jiajia, who also runs a restaurant in the township, is from Lijiang, a city in Yunnan. She followed relatives to Dulongjiang 11 years ago, seeking business opportunities.

She started as a food vendor with her mother, and although the business was not that profitable back then, Tang Jiajia chose to stay because the locals were all very nice people.

Shops in Dulongjiang enjoy a tax-free policy and rent is inexpensive. Thus, she decided to settle down in the township. Her business has since developed into a restaurant. "Now we can easily earn 100,000 yuan ($14,700) a year," Tang Jiajia said. "With more tourists visiting in the future, we believe the business will get better."

Rainbow weavers

Blanket weaving, a traditional handicraft of the Derung ethnic group, has also helped local people find a way out of poverty.

The original material for the blankets, featured with stripes of bright colors, was made from wild hemp. When people in the township were still living in primitive society before the founding of the PRC, these blankets are everything that they had—as clothes to cover their bodies during the day and as quilts at night to keep warm. Weaving blankets was what Derung women did in the evening after returning from farm work all day.

Jin Chunhua, a 34-year-old Derung weaver, learnt the weaving skill when she was 15 years old from her mother. She didn't expect the blankets she weaves can expose her to a much bigger world.

Sponsored by a project launched by the Beijing Contemporary Art Foundation to promote Derung blankets, Jin and another Derung woman have visited Shanghai and spent a month there every year since 2016, working with fashion designers from a domestic clothing company to create new blanket patterns and receive training on different weaving skills.

Before traveling to Shanghai, Jin's longest trip had been to the county seat. That was a three-hour trip by bus. During their time in the megacity, the two Derung women spent almost every day with the designers, receiving training and adjusting pattern designs and colors to cater to modern tastes. The weaving material was changed to wool and the colors, which were too bright according to the designers, were made duller and lighter.

They finally nailed down 10 pattern designs and after the two women returned home, they set up a cooperative and organized more Derung women to join the project, with 17 women joining in the first year. The weavers completed 58 Derung blankets from the new materials such as wool provided by the company, with each piece 45 cm wide and 8 meters long.

The company then made them into cushion covers, different size blankets and cloaks. The products hit stores in Shanghai and online shops and sold out in five months.

A Derung woman shows the blanket she weaves at home in Dulongjiang Township in Gongshan Dulong-Nu Autonomous County, southwest China's Yunnan Province, in December 2017 (COURTESY PHOTO)

During the second year of the project, the team of weavers expanded to 24 and the order from the company increased to 120 pieces. Each piece earned the weaver 400 yuan ($59). The average annual income for the Derung people was only 4,378 yuan ($644) at the time. "A woman can weave nine pieces at most, which can earn her 3,600 yuan ($530)," Jin said.

The weavers' creations were on display at the 56th Venice Biennale in 2015. The walls at the China Pavilion were decorated with Derung blankets.

"This project has helped us to tap the market potential in preserving and promoting Derung blankets," Xiao Songjun, a local official, told *Beijing Review*. "We are planning to set up an association for Derung blankets and explore more channels for unique handcrafts of Derung ethnic group." ■

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Culture

AUTHOR COLSON WHITEHEAD REMINDS US TO SEE OURSELVES

BY MITCHELL S. JACKSON

PHOTOGRAPH BY WAYNE LAWRENCE FOR TIME

THERE'S COLSON WHITEHEAD UP ahead, minutes before our arranged time, dawdling on the corner of 126th Street and Fifth Avenue, dressed in slim jeans and Chelsea boots, his dreadlocks cutting a clean line across his back. I'm content to nurse a half-block distance between us and observe. Whitehead's walk, by the way, is not what the youngsters would call *swaggerific*. Swagger is imitative, and the way Whitehead moves evokes less a simulacrum of a strut than it does acceptance of his stature and physiology, most notably that he's long and lean and a little knock-kneed. He stops on 127th Street, and since I'm a few paces behind him and don't want him to glance back and peep me trailing, I call his name. He snatches wired headphones out of his ears and reaches out for a handshake—our first. "Nice to meet you," I say. "I think we're headed in the same direction." He smiles, and the sun hits the blue of his glasses. "Yes, I think so," he says, and in tandem, we mosey the half block it takes to reach our destination: the Langston Hughes House.

Whitehead is on his way to a landmark place in African-American history in more ways than one. Three years ago, he published a novel, *The Underground Railroad,* that shot him to literary stardom. With it, he became only the second writer of color

Whitehead's ninth book, a harrowing story of an abusive Jim Crow–era reform school, will be published July 16

Whitehead in New York City at 16 with his brother Clarke; on a family vacation in Montego Bay, Jamaica, at 18; and in the 1991 Harvard yearbook

and sixth writer ever to win both a National Book Award and a Pulitzer Prize for the same novel. The book, which imagines an actual railroad for the transportation of enslaved people in search of freedom, was also an Oprah's Book Club selection, sold over a million copies and earned the praise of President Obama. Barry Jenkins, the Oscar-winning director of *Moonlight* and *If Beale Street Could Talk,* is adapting it into a limited series.

Where do you go after that? For Whitehead, it's the era of Jim Crow. His next novel, *The Nickel Boys,* out July 16, follows two boys struggling through their sentences at an abusive reform school under the specter of segregation in the 1960s. It's a book that will further cement his place in the pantheon of influential American writers.

He has written seven books of fiction and two books of nonfiction over a 20-year career. And even before *The Underground Railroad,* he had earned accolades and become a best seller. Explorations of race and history have been a through line from his early works—his first and second novels, *The Intuitionist* and *John Henry Days*—to the present. But Whitehead is unwilling to be boxed in by any school of thinking, any mode of creating. He has also written satire *(Apex Hides the Hurt),* zombie horror *(Zone One)* and a hilarious nonfiction book on poker *(The Noble Hustle)*. George Saunders, an acclaimed contemporary, writes to TIME: "He is a splendidly talented writer, with more range than any other American novelist currently working—he can be funny, lyrical, satirical, earnest—whatever is needed by the work."

Though it's dialed up or down in each book, I read a constant thread of humor in his work, that he's having a damn fine time creating it and, furthermore, that he's in command of both his subject and the conventions of any given genre, which allows him to transform them.

Whitehead's two most recent novels stand apart in that they most directly satisfy a mandate set out by W.E.B. Du Bois, co-founder of the NAACP, for black writers to create work in service of justice. Books about the past have always helped us understand our present; Whitehead's in particular feel crucial to understanding our current cultural and social climate. In a moment when Senate majority leader Mitch McConnell has made headlines for discrediting the need for slavery reparations and former Vice President and current presidential candidate Joe Biden is under fire for excusing his past work with segregationists, Whitehead's books are a vital reminder that American racism is far from bygone. "I had never read anything with an enslaved person as a main character where I really felt that sense of dread, claustrophobia and the narrowing of choices," recalls two-time National Book Award winner Jesmyn Ward, who served on the jury the year *The Underground Railroad* won. "I felt the book could be a breakthrough experience for some people."

As we approach the home of one of the most famous black writers ever, I tell Whitehead that it now houses the I, Too, Arts Collective, a nonprofit dedicated to nurturing voices from underrepresented communities in the arts—one I've worked with as an author. The program director greets us at the door. She offers us a tour of the home that today smells of the polish used to buff the dark wood floors to high gloss. Whitehead obliges, but not before hanging his coat in the hallway ("I didn't want to disrespect Langston's house," he'll say later), and follows her through the old brownstone. She walks us past a front room adorned with a grand piano and Hughes' typewriter perched on the ledge above a fireplace. Whitehead asks questions, idles for a moment in each room, taking it in. He seems to reflect on the importance of Hughes' legacy, of him moving through the space of a writer who made space for him.

One of Hughes' most famous poems is "Harlem"—named for this neighborhood that birthed African-American literature's most storied renaissance. The poem begins with the verse: "What happens to a dream deferred?/ Does it dry up/ like a raisin in the sun?" Hughes was referencing the dreams of African Americans in Jim Crow America, but his question could also be asked of an author's dreams. The most grand of those feature critical acclaim, awards, strong sales and, for an uncommon few, a place in the zeitgeist. For most writers, those kinds of dreams are deferred, sometimes forever. For Whitehead, who is just 49, they are a rare reality.

If greatness is excellence sustained over time, then without question, Whitehead is one of the greatest of his generation. In fact, figuring his age, acclaim, productivity and consistency, he is one of the greatest American writers alive.

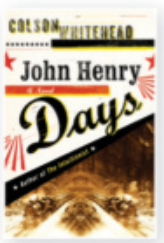
ARCH COLSON CHIPP WHITEHEAD went by Chipp as a kid, then deeming the name too "preppy," switched over to Colson at 21. He learned only a few years ago that Colson, the name of his maternal grandfather, was also the name of an enslaved Virginia ancestor who purchased his and his daughter's freedom.

Whitehead was the third of four children, with two older sisters and a brother

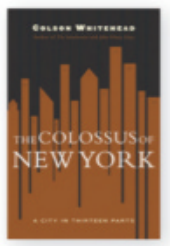
TWENTY YEARS OF INFLUENCE

Whitehead has found inspiration in everything from his childhood summers in the Hamptons to zombie films. "The intent is for me to figure out through my art how America works, how people work, and hopefully readers come along for the ride," he says. Here, he describes his books.

THE INTUITIONIST
1998
"In New York, inspectors had precincts sort of like cops, so I thought, Wouldn't it be weird if an elevator inspector had to be a real inspector and solve a case?"



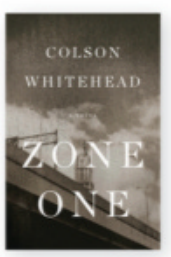
JOHN HENRY DAYS
2001
"I wanted to be more expansive and have many different voices, a big American chorus. *John Henry Days* is very unruly, like the country itself."



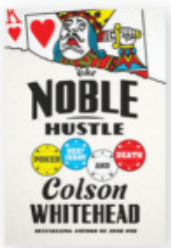
THE COLOSSUS OF NEW YORK
2003
"After 9/11, I put down what I was working on to figure out how to live in my city. It was part therapy, part exercising a new narrative muscle."

APEX HIDES THE HURT
2006
"I was thinking about how a city is formed and saw an article with a branding consultant, so I put those ideas together: a branding consultant on local history."

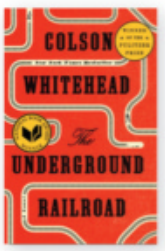
SAG HARBOR
2009
"It was time for me to not be so distant. I would grow as a writer and a person if I stopped avoiding personal material. Now I'm happy to call it autobiographical."



ZONE ONE
2011
"I saw *Night of the Living Dead* at an early age, and zombies became part of my psychological landscape. I'd have zombie dreams every month for years."



THE NOBLE HUSTLE
2014
"Imagining the embarrassment of getting kicked out of the World Series of Poker on the first day forced me to try to be a better person, a better poker player."



THE UNDERGROUND RAILROAD
2016
"I didn't think I could pull it off. In 2014, it seemed like I'd been avoiding it for so long that it was time to do the book that scared me."

THE NICKEL BOYS
2019
"It's about places with no accountability. That dynamic between the powerful and the helpless, where our worst impulses can be let loose."

10 months his junior. His parents owned an executive recruiting firm, a business that allowed them to send their children to elite private schools, travel and—as he writes about in his most personal book, *Sag Harbor*—spend summers in the Long Island village that serves as a vacation spot for affluent blacks. But his home was not without trials. "My dad was a bit of a drinker, had a temper," Whitehead says. "His personality was sort of the weather in the house." Whitehead's father wasn't close to his extended family; however, he was vocal about his views on freedom as it pertained to his people. "He was apocalyptic in his racial view of America," says Whitehead. He adds that his father held the outlook "for good reason," suggesting it also informs his point of view.

Whitehead explains that in response to his father's moods, he and his brother, who died last year, retreated into comics, books, music and TV. He played a lot of Dungeons and Dragons and the video game *Wizardry*—he still turns to video games in his down time—and for a short period practiced in a band called Jose Cuervo and the Salty Lemons. (Go figure, they only staged one show.) Gen X-er that he is, he loves Sonic Youth's "Daydream Nation" and Prince's "Purple Rain," so much so that he listens to them while writing the final pages of his books.

Around high school, Whitehead was also reading fiction that would influence his decision to pursue writing—Gabriel García Márquez's *One Hundred Years of Solitude* and Jean Toomer's *Cane;* also Shirley Jackson's story "The Lottery" and a chapter of Ralph Ellison's *Invisible Man.* Whitehead recalls thinking he might one day do what Ellison did.

A self-described "diligent student," he went to Harvard. Imani Perry, now a Princeton professor of African-American studies, attended Yale and remembers seeing Whitehead at a gathering for black Ivy League students in their college days. "He was definitely engaged socially but also kind of above the fray," recalls Perry. "He seemed reflective and interior."

Whitehead thought he'd become a "super experimental writer." The Harvard English department, which he describes as "conservative" in those days, didn't teach many classes on the modern American novel, so Whitehead studied it on his own, reading books by innovators like Thomas Pynchon and John Barth as well as black absurdists like Ishmael Reed.

After college, he returned to New York in 1991 and, jobless, lived with his parents for a time. He started writing for the *Village Voice.* Meanwhile, he completed his first novel manuscript, about an ill-fated child star, and landed an agent. More than 20 rejections later, she dropped him. "I became a writer not through wanting to write comic books or being a journalist," he explains. "But just saying I'm going to do it again. No one else is going to write it for me, so I might as well start."

Nicole Aragi, now his longtime agent, sold his second attempt at a novel, *The Intuitionist.* Whitehead's debut, about a black female elevator inspector, was a critical success and drew the attention of a future collaborator. "Pre-*Moonlight,* pre–*Beale Street,* I had dreams of turning his first book into a movie," says Jenkins. "And there was no way that was gonna happen because you know Colson's always been big-time, and it's taken me awhile to catch up to him."

ARCHIVAL: COURTESY COLSON WHITEHEAD (2), HARVARD YEARBOOK PUBLICATIONS

Whitehead doesn't present like somebody who believes he's big-time. Matter of fact, in the several hours we spend together, I don't detect an air of self-importance. To his credit, he also hasn't chased the commercial success possible for writers who when their work finds a large audience make more of the same. Instead, he's chosen the tougher route, following the imperatives of his interests and imagination to produce singular work. Then wagered the same risk again.

Lest you think Whitehead spends his days alone in his study, he lives a family-oriented day-to-day. Raising his 14-year-old daughter and 5-year-old son with his wife, literary agent Julie Barer, he writes while his kids are at school and is the go-to parent for cooking dinner. Picture him dropping his boy off at pre-K and then writing one of those great monologues for Ridgeway, the slave catcher in *The Underground Railroad:* "I prefer the American spirit, the one that called us from the Old World to the New, to conquer and build and civilize. And destroy that what needs to be destroyed. To lift up the lesser races. If not lift up, subjugate. And if not subjugate, exterminate."

OH, I HAVE MY THEORIES on the critical reception to creative work exploring the institution of slavery. Without writing a mini dissertation, I'll say it's the perfect subject for at once affirming white privilege and assuaging white guilt. Still, subject alone does not make a great book. It's what the writer does with that subject: in this case, tell a story that calls for a reckoning with the lasting ills of America. And it's a testament to Whitehead's talent that he turned a subject of national turmoil into an indelible work of art, one that could've only been made by him.

If *The Underground Railroad* told of how whites asserted their privilege and power over blacks through slavery, then in the new novel, *The Nickel Boys,* Whitehead turns his focus on the trauma its descendents have inherited. Set at the Nickel Academy reform school in the '60s, the novel centers on two pupils, Elwood and Turner, who debate the possibilities for surviving a racist America. The school was based on the real Arthur G. Dozier School for Boys in Florida, notorious for its mental, physical and sexual abuses, which was closed in 2011; dozens of bodies have been found buried on the school's grounds. Whitehead intended to visit but never made it. "The further I got into the book, the more depressed and angry I got about going to the place, until I would only go there if I had a can of kerosene and a match," he says.

Whitehead saw himself in the disparate views of Elwood, an optimist who treats Martin Luther King Jr.'s words as gospel, and Turner, a cynic who evokes a rage and disillusionment that will resonate with many readers. He drew on that tension to bring the characters to life. "A piece of art really works when you see yourself in the main characters and you see a glimpse of yourself in the villains," Whitehead says. "You see yourself in the minor and major characters where, but for a quirk of fate, you could be in there with them—that could be growing up as an African-American male in America."

De jure Jim Crow ended with President Lyndon B. Johnson signing the Civil Rights Act of 1964 and the Voting Rights Act the following year, but even a slight probe of the United States—its neighborhoods, school systems, criminal-justice policies, re-emergent brazen hate crimes—turns up evidence aplenty that the evil heirloom of Jim Crow endures.

Whitehead knows what every black person should: that no amount of accomplishment or wealth can exempt one from that legacy. "I carry it within me whenever I see a squad car pass me slowly and I wonder if this is the day that things take my life in a different direction," he says. "It's there with most young men and women of color. It's with us when politicians can appeal to people's most base prejudices and against their economic interests because their fears, their irrational weaknesses, are more powerful than doing what's right for them. It's with us when scheming men are trying to figure out how to gerrymander their state to deprive brown people of their vote, to figure out which polling places to close so that people have a difficult time getting time off and traveling to register or vote. A lot of energy is put into perpetuating the different means of controlling black people under slavery, under segregation and now under whatever you want to call this contemporary form."

Historian Nell Painter, a professor emeritus at Princeton, describes a "purposeful ignorance" about the most painful aspects of our history. "Many Americans can't say the world *black* without sort of stumbling over it first," she says. "So, it's a challenge that so many American readers avoided, forever, and that many are now ready to face." *The Nickel Boys* dramatizes the truth of Jim Crow and its reverberations, while at the same time presenting a story that's hopeful, or at the least honest, about the human

'A PIECE OF ART REALLY WORKS WHEN YOU SEE YOURSELF IN THE MAIN CHARACTERS AND YOU SEE A GLIMPSE OF YOURSELF IN THE VILLAINS.'

COLSON WHITEHEAD

WAYNE LAWRENCE FOR TIME

capacity to outlast the terrors of injustice.

Whitehead has proved his mastery over his craft. Yet it's taken time for him to accept his own place in the literary world. About a decade ago, he ran into Toni Morrison—who he says is *the* Great American Writer—on the Princeton campus. She invited him for coffee. "I was like, 'I don't deserve to have coffee with Toni Morrison. That's ridiculous,'" he says. He never went through with it. "I was too embarrassed that she invited me. It's like getting someone else's mail."

Would he have accepted the invitation today? "I'm less self-conscious now," he says. "I have fewer hang-ups."

A COUPLE DAYS after meeting him in Harlem, I head to Whitehead's new second home in East Hampton, which I will learn is 4,000 sq. ft. and sits on two acres of land. Pulling up, I can see him through the floor-to-ceiling windows that look into the kitchen. There he is standing over the stove. He waves and hustles to the orange front door. He's dressed in a T-shirt, blue jeans and red Chuck Taylors—all the right amount of worn in. Whitehead is making

Whitehead doesn't dawdle. "I only have so much time," he says. "I should probably start another book before I'm struck by lightning or something."

jerk smoked pork (his smoker is beloved) and potatoes and offers to share the recipes. Lunch won't be ready for a while, but he's got snacks.

Hours later, he serves me a plate. He warns of spiciness and pours me a glass of water. While he busies himself elsewhere in the house, I eat the meal alone in his kitchen, feeling thankful for his graciousness and culinary skill. If you're wondering, the food is scrumptious.

I'd seen Whitehead around New York a few times at literary events, and because we hadn't conversed, hadn't exchanged a handshake or dap or the universal black man's acknowledgment known as "the nod," I'd judged him a certain type. But our conversations have been easy, and his current hospitality feels real, and well, call me a softy, but this fast, it's almost as if he's a literary-big homie I ain't seen in some Sundays.

Some writers impress critics and win accolades; others tally robust sales. Whitehead is the rare writer who's accomplished both. "I was definitely broke," he admits. "Most of my life I've been living check to check." But please believe he ain't living check to check no more. He tours me around the house, a stunner. Upstairs, he shows me a master bedroom as big as my old Harlem apartment, and out back there's an in-ground swimming pool. His home is what I was hoping it would be because, as far as literary careers go, he's a paragon, and I for one welcome proof that what he's achieved can earn such a life.

We sit down to chat in his office, and he offers to show me an outline from *The Underground Railroad*. He opens the file, and points to the beginning. There are no roman numerals or numbers or letters, only sentences, many of which describe things I remember from the book. "I know the beginning and the end," he says. "Then it gets fuzzy, and things drop in and out." He's already working on his next project, one he started before writing *The Nickel Boys:* a crime novel set in Harlem in the 1960s.

As we talk, I notice markings on one of the moldings. He later tells me they're dated height measurements of the children of the home's previous owners. It strikes me that Whitehead didn't erase them but rather has added an entry for his son. That small decision might explain some of his writing practice, the act of taking old forms or subjects and filtering them through his imagination, of holding the confidence that one needn't try to erase what's come before to make something new.

Whitehead steps away, and while he's gone I lift medals to feel their weight, pull a framed award certificate off the shelf and read its small print, flip through the stack of framed posters. I wonder what it must feel like for him to work in this space, to look over at the trappings of his accomplishments, to glance out the window at the forest that is his yard. It strikes me that it might've been tough for Langston Hughes and Whitehead's other forebearers to fathom his achievements, that he just might be beyond their dreams. ☐

Jackson is the author of The Residue Years *and* Survival Math

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Time Off

SLY FOX
Russell Crowe disappears into the role of disgraced Fox News founder Roger Ailes

INSIDE

A PROVOCATIVE BOOK ABOUT THE SEX LIVES OF WOMEN

MIDSOMMAR *IS A FOLK-HORROR FEVER DREAM*

FLORIDA GIRLS *IS A PERFECT SUMMER SHOW*

TELEVISION

In Fox News' America, seeing is believing

By Judy Berman

MOST PEOPLE WHO WATCH SHOWTIME'S NEW miniseries *The Loudest Voice* will go in knowing quite a bit about its protagonist. Though he started in daytime TV, Roger Ailes made his name as a ruthlessly effective media strategist for Richard Nixon, Ronald Reagan and George H.W. Bush. In 1996, after a bad breakup with NBC, he joined forces with Rupert Murdoch to found Fox News. Over the next two decades, Ailes became a household name—not just because of the success of his startlingly partisan network, but also because he was exiled from his empire in 2016 amid multiple allegations of sexual misconduct. He died at home the following spring.

It's a Shakespearean tale that, as Ailes would have sensed, makes for captivating TV: a man who rode base urges to unparalleled political influence was ultimately destroyed by those same appetites. Based on Gabriel Sherman's 2014 biography *The Loudest Voice in the Room: How the Brilliant, Bombastic Roger Ailes Built Fox News—and Divided a Country,* the adaptation opens at the beginning of Ailes' reign. Each of the seven episodes covers a critical year for Fox News and its increasingly powerful—and paranoid—leader, played by Russell Crowe in a fat suit and pounds of latex makeup. Even the casting was a gimmick, given that Crowe's anger problem is at least as notorious as Ailes'.

But there's nothing cheap about the show. A premiere scripted by *Spotlight* writer-director Tom McCarthy (also an executive producer) sets a talky, thoughtful tone for a saga that needs no embellishment. Without glossing over Ailes' slimiest deeds, a roster of directors including prestige-TV standbys Kari Skogland *(The Handmaid's Tale)* and Jeremy Podeswa *(Game of Thrones)* exercises enough restraint to avoid silliness. Crowe, a world-class bellower, only occasionally flips the switch from whispery, methodical creepiness to full-on scenery chomping. The result is an elegant mix of character study, workplace drama and political thriller.

Does *The Loudest Voice* offer revelations about Fox News that we couldn't have gleaned from Sherman's work or absorbed simply by living for decades in a world where Ailes both made news and shaped it? Not really. And that lack of new information has some critics dismissing the miniseries as pointless. ("*The Loudest Voice* really sticks it to Roger Ailes, who is still dead and doesn't care what anyone thinks," a Washington *Post* headline cracked.)

Yet this reaction ignores the unique power of visual storytelling. Knowing the facts isn't the same as watching one man oscillate from political kingmaker to brutal boss to devoted husband to sexual predator; the latter forces you, with every frame, to consider how those Wikipedia headings add up to a life. *The Loudest Voice* is thorough in its efforts to make every facet of Ailes' personality make sense in the context of his biography.

RECENT HISTORY, REVISITED
A spate of series have shifted the way we think about the news

CHERNOBYL

LEAVING NEVERLAND

SURVIVING R. KELLY

WHEN THEY SEE US

It isn't the only high-profile show this year to take on real, difficult history in ways that push our collective understanding of them forward. As nonfiction and docudrama proliferate on TV, miniseries as different as Lifetime's *Surviving R. Kelly* and HBO's *Chernobyl* are putting faces to previously unseen victims and forcing public reckonings with tragedies that have been in the news for decades. Viewers, for their part, seem more eager than ever before to have those conversations.

FOR AS LONG AS EACH HAS EXISTED, TV and film have excelled at turning the cultural conversation to underdiscussed historical events and contemporary issues. Alex Haley's novel *Roots* was a best seller before it came to television in 1977, but it was the miniseries that fueled a national dialogue about black history. Documentaries have changed harmful corporate policies *(Bowling for Columbine, Blackfish)* and standards of mental-health care *(Titicut Follies)*. It was *Spotlight,* and its Oscar win, that inscribed the Boston *Globe* team that uncovered the Catholic Church sex-abuse scandal in the canon of American heroes. On the other hand: the Ku Klux Klan had been defunct for decades before D.W. Griffith's racist 1915 Civil War epic *The Birth of a Nation* revived it. In the realm of nonfiction, Leni Riefenstahl's *Triumph of the Will* helped sell the Nazi agenda.

But TV viewers' insatiable appetites for serious, politically engaged and potentially actionable retellings of familiar true stories feels like something new. *Surviving R. Kelly,* along with *Leaving Neverland*'s profile of a pair of Michael Jackson accusers, are extensions of the #MeToo movement and the true-crime trend. Accusations that R. Kelly sexually abused underage girls had followed the R&B star for the better part of two decades, yet it took a miniseries that interviewed many of his alleged victims to

PREVIOUS PAGE: JOJO WHILDEN—SHOWTIME; THESE PAGES: JIM FISCUS—SHOWTIME

finally make his record label drop him and prosecutors to start building new cases against him. Though Jackson is dead, *Neverland* not only reshaped his legacy but also disrupted plans for TV programs, a musical and other tributes planned to coincide with the 10th anniversary of his death.

It isn't just documentary series that have moved the needle in this way. Soon after the May debut of Ava DuVernay's Netflix drama *When They See Us,* which follows the five black and Latino teenagers wrongfully convicted in the 1989 Central Park jogger case, sex-crimes prosecutor turned novelist Linda Fairstein (the show's villain, played by Felicity Huffman) was dropped by her publisher and agent. Despite penning a *Wall Street Journal* op-ed that called the show an "outright fabrication," she also resigned from several nonprofit boards. To further bridge the gap between fact and fictionalization, Oprah interviewed the real Central Park Five for the follow-up special *When They See Us Now.*

This spring's surprise hit *Chernobyl* may be the best example of viewers' newfound eagerness to reopen historical wounds. HBO buried the impressive but relentlessly bleak miniseries about the Soviet nuclear meltdown on Mondays, only to watch its audience swell to 6 million, a huge number for a premium-cable show. Russia was so rattled by its impact that a state TV network plans to air its own version that will apparently implicate an American spy in the tragedy. And audiences aren't just thinking about Chernobyl; they're also visiting the real site in droves. Whether Americans see parallels to existential threats like climate change or to Russia's potential to cause worldwide harm, the show's vision of government ignorance, incompetence and malice clearly resonated.

POPULAR ENTERTAINMENT always serves some kind of larger societal function, even if it's pure escapism. Among this new crop of miniseries, some of those preoccupations, from #MeToo to race and the criminal-justice system, are obvious. But on a less conscious level, these shows channel widespread political frustrations, at a time when so much of the public discourse revolves around politics. Donald Trump played a role in the Central Park Five saga, agitating for the boys to get the death penalty. He's present in spirit throughout *Chernobyl,* in the form of leaders who disregard science. And I'm not the first to observe that #MeToo is, in part, a way of channeling anger at his relative immunity to allegations like columnist E. Jean Carroll's recent claim that he sexually assaulted her in a Bergdorf's dressing room.

Though we've been hearing about their subjects in the news for years, if not studying them in history classes, it seems that watching these stories unfold in a visual medium is what nudges them into a realm of coherent memory—whether that means protesting or vacationing in a nuclear evacuation zone. Beyond showing us real, if fictionalized, people and events of which we have only secondhand knowledge, these shows engage us with them through a narrative that makes us feel we're observing and drawing our own conclusions. Even if it's an illusion—every creator has an agenda, after all—that sense of independence is crucial in an atmosphere of partisanism, fake news and information overload. These shows cut through the noise in the same way cell-phone videos of police brutality do; they make us witnesses. (Which explains why *When They See Us* is such a powerful title.)

> ***'There is a tendency in the media to simplify me to the point that I am somehow a tough guy.'***
>
> **ROGER AILES,** to the New York *Times,* in 1989

As it happens, our increasing need to see before we can believe has a lot to do with Roger Ailes, whose purposeful conflation of news, opinion and conspiracy theories played no small part in making Americans across the political spectrum instinctively question what the media frames as truth. And that's what makes *The Loudest Voice*—with its holistic, relatively understated depiction of a personality prone to caricature—effective. In weaving Ailes' neuroses and the misdeeds they fueled together with the rise of Fox News until the network becomes a mirror of the man, the show does more than stick it to the dead. It demonstrates how one person's cynicism and paranoia reshaped a nation. Seeing it happen may be the first step in finding an antidote. ☐

NONFICTION

What women want

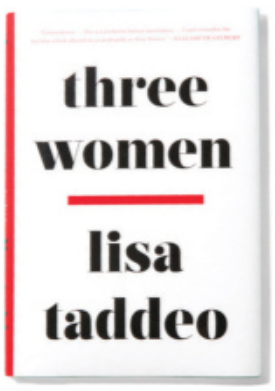
By Lea Carpenter

"EXPRESS YOURSELF, DON'T REPRESS YOURSELF/ Express yourself, don't repress yourself." The opening lines from Madonna's song "Human Nature" are pretty simple. And yet when it was released in 1995, the song wasn't just a song; it was an artist's slap back at her detractors. It was a battle cry, a lullaby, a lyric deposition on sex and a woman's right to it. A *J'accuse* on a woman's right to take risks. The song was a stance against the then socially accepted norms about women in an era before #MeToo, before safe spaces, before wokeness. Before all of that, there was Madonna, providing women with one way to think about "it."

And now, with her debut book *Three Women,* journalist Lisa Taddeo offers another way. *Three Women* is a battle cry too, and likewise a lullaby and a lyric deposition on that subject usually hovering right next to sex: desire. Madonna made you want to dance. Taddeo makes you want to feel.

Inspired in part by Gay Talese's *Thy Neighbor's Wife,* Taddeo set out to describe current states of American female desire. She found three women (two of whose names she does not disclose, except for Maggie, whose case is public record) who allowed her into their lives. She spent eight years searching for subjects across the country, ultimately following Lina, in Indiana; Maggie, in North Dakota; and Sloane, in Rhode Island. Taddeo effectively lived with and through them, recording their sexual secrets, hopes and fears and, ultimately, the origins of those fears, which in all three cases provide exceptional plot jolts.

Taddeo drove across the U.S. six times in eight years to search for sources



TADDEO'S MOST OBVIOUS LIMITATION was who would be willing to open their lives to her and to do what for many of us is unimaginable: confess what we really want. The three women in the book happen to be straight, white and living above the poverty line. Despite this, Taddeo uses their experiences to raise many questions that aren't, at least in the abstract, confined by sexual identity, ethnicity or socioeconomic status. Questions like, what happens if you fall in love with a much older person and then that person falls in love with you too? And what if it's your married teacher? Or what happens when you start an affair with an old sweetheart because your spouse won't kiss you? Or what about when you have a privileged life and an enviable marriage—and your partner likes to watch you have sex with other men, women and sometimes both? And what if you like it? These are the stories Taddeo listens to, and tries to understand.

Taddeo never judges. She doesn't slip into pseudopsychological frameworks for sex. She inhabits her subjects. And if you think her topic sounds a little louche, or isn't quite your thing, the true magic of this book may lie less in the subject matter and more in the style. The illusion Taddeo creates is that there actually is no journalist at work here—no author, no thesis. She's an apolitical messenger channeling her subjects' potentially contentious perspectives. It's the literary brilliance of the book that will knock you back—how she channels these women's voices through her own.

In many ways Taddeo's subject isn't sex. Or even desire. It's memory. "We don't remember what we want to remember," she writes. "We remember what we can't forget." Memory is central to the sexual self-discovery of all three of her subjects. Until you understand your past experiences of desire, you cannot understand yourself. Taddeo also carefully confronts the limits of memory, most heartbreakingly with Maggie, the woman who falls for her older, married teacher, whose understanding of herself shifts radically as she grows up and comes to realize that what she experienced as true love was, for her lover, not love at all. For anyone who thinks they know what women want, this book is an alarm, and its volume is turned all the way up.

Carpenter is the author of Red, White, Blue

FICTION

A daughter's diary

The narrator of Courtney Maum's third novel, *Costalegre,* is desperate for her mother's attention. It's 1937, and 15-year-old Lara Calaway is moping around the southwestern coast of Mexico. Her mother Leonora, a wealthy modern-art collector, has invited several offbeat artists to stay at their house.

The novel, which is structured as a collection of Lara's diary entries, draws inspiration from the fraught relationship between art collector Peggy Guggenheim and her daughter Pegeen. She writes of her anxieties stirred up by the guests, and how she longs to see her father and brother at home in Europe, where World War II is beginning to appear on the horizon. If at moments *Costalegre* pokes fun at a spoiled teen asking her mother to notice her, at others it's a poignant illustration of the outsize role mothers can play in their daughters' most formative years. In one diary entry, Lara lists the words, both bizarre and moving, she associates with Leonora: she is both "the pink hole in her pillow"and "the largest, biggest hat."

The plot picks up when a Dadaist sculptor joins the group and immediately makes Lara feel seen. As Lara begins to understand her place not only in her mother's world but also in her own, Maum crafts a timeless narrative about the impatience and confusion that come with growing up. —*A.G.*

TADDEO: J. WAITE; BOOKS: KIM BUBELLO FOR TIME

NONFICTION

When the cook escapes the kitchen

By Annabel Gutterman

FOR MORE THAN 13 YEARS, NOMA WAS a mecca for foodies. The Michelin-starred Copenhagen restaurant boasted glowing reviews and frequently topped best-of-year lists, making it nearly impossible to score a reservation. Specializing in food with a Nordic flair, it inspired eateries around the globe and made a star of chef René Redzepi.

Then, in 2015, Redzepi announced a move that stunned the culinary world: he revealed he was going to close Noma and travel the globe in search of fresh inspiration. Redzepi planned to reopen Noma (and did, in 2018—it placed second on the 2019 World's 50 Best Restaurants list) but promised the new version would be different.

'These dishes were like songs you couldn't get out of your head.'

JEFF GORDINIER

In his new book, *Hungry,* food journalist Jeff Gordinier follows Redzepi's unconventional path to reinventing the best restaurant in the world. When he met Redzepi in 2014, Gordinier himself was in need of some reinvention, as his marriage was on the brink of collapse. The book traces his four years traveling with the chef, as the latter searched for new flavors in cities like Sydney, Tulum and Mérida.

Writing about food can be tricky, especially when its ingredients are unfamiliar to many readers. But in *Hungry,* Gordinier invokes such playful and lush prose that the scents of mole, chiles and even lingonberry juice waft off the page. Drinks like the pre-Columbian *tejate* are described in terms of their most accessible textures (in that case, a frothy meringue), and unexpected pairings are refined to their elemental flavors. He tells of a dish from his first meal at Noma, before it closed—sea urchin and hazelnuts—by conjuring the utterly unintimidating experience of eating butter on saltines.

As the journey progresses, Redzepi opens pop-ups across the map and runs into unexpected obstacles. The recipes aren't right, the pressure's too high. Key investors question their involvement. Gordinier's accounts of these stumbles give the book a measure of tension. But the real drama of *Hungry* lies in a paradox its author probes about the art of cooking. Redzepi's plates remind Gordinier of music—but a thoughtfully crafted dish can't be replayed. Food exists in a liminal space. It is created to be eaten, and, in a way, to be destroyed. ◻

William Jackson Harper, Will Poulter, Pugh and Reynor: Let the grim games begin!

MOVIES

Sinister revelry reigns in *Midsommar*

By Stephanie Zacharek

HELL IS OTHER PEOPLE'S CUSTOMS. That could be the tagline for Ari Aster's terror-round-the-maypole dread-fest *Midsommar,* if the movie had even the remotest sense of humor about itself. Dani (Florence Pugh), a young psychology student who has just lost her sister and parents in a horrific incident, accepts a reluctant invitation from her loser boyfriend Christian (Jack Reynor) to join him on the trip to Sweden he's about to undertake with some buds from his graduate program. One of the guys, the excessively mild-mannered Pelle (Vilhelm Blomgren), has invited the group specifically to observe a traditional midsummer celebration hosted by the people of the small, cloistered community in which he was raised. There will be flowers, singing, men and women in white robes, and filleted human corpses flopping about. *Skal!*

Midsommar is Aster's follow-up to his 2018 grief-a-go-go art-horror exercise *Hereditary*—and beware the filmmaker who's exercising, when just making films will do. Aster has some good ideas, and skill at bringing them to life onscreen: there's a flower crown, worn by a fair maiden, whose blossoms appear to breathe—it blinks at us lazily, like a malevolent sea creature. *Midsommar*—in places reminiscent of the 1973 British horror classic *The Wicker Man*—is best during these wild and spooky storybook moments. Nature is all around, and it's not always your friend.

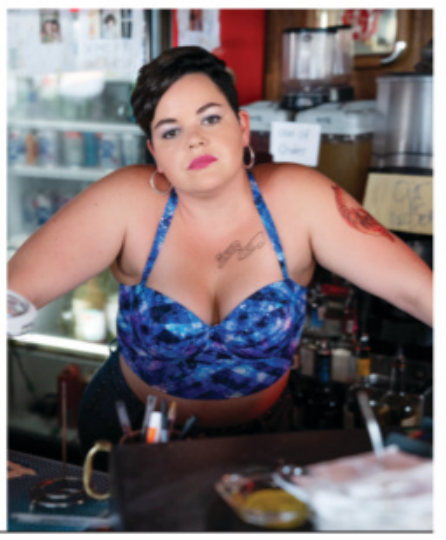
But Aster is obsessed with building tension to the point of losing the plot. He can't stop at merely glancing or suggesting. Instead, he's constantly reminding us—with ominous references to runes and sacred books, with tastefully framed shots of a deformed oracle who's the product of incest, with dialogue that tries in vain to make you care about the travails of young, self-absorbed academics—that this is "smart" horror and not your run-of-the-mill scare-fest. Pugh, who was so chillingly blank and wonderful in William Oldroyd's 2016 revenge-of-the-wife drama *Lady Macbeth,* gives a sturdy performance, but she's lost in the midst of Aster's obsession with grisly Hieronymus Bosch–tinged tableaux and icky, smashed skulls à la Francis Bacon. There's also some decidedly unsexy ritualistic sex, as naked old people look on. Enter the love shack at your own risk. ☐

TELEVISION

Florida Man's reckless daughters

NESTLED IN A COASTAL HOLlow between Tampa and St. Petersburg, beachy Clearwater, Fla., is known as a vacation destination. But it's the townies who dominate *Florida Girls,* a Pop TV sitcom whose creator-star Laura Chinn is a local. Combining elements of *Claws, Trailer Park Boys* and the Florida Man meme, this irreverent look at working-class womanhood in Clearwater cements a cable network best known for airing *Schitt's Creek* in the U.S. as a destination for comedy.

Hardly *Sex and the City* clones, the show's foursome of trailer-park roomies includes pugnacious alpha Kaitlin (*Heathers* standout Melanie Field), dopey Erica (Patty Guggenheim) and Jayla (Laci Mosley), who's desperate to impress her rich older beau. Chinn's Shelby is the grounding influence, a bartender who vows to get her GED after their upwardly mobile fifth friend flees Florida. Suffused with raunchy humor—and enough warmth to ensure we're laughing with the characters more than at them—*Florida Girls* is among the most enjoyable shows of the summer. —JUDY BERMAN



MIDSOMMAR: A24; FLORIDA GIRLS: POP TV

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Erin Lee Carr The documentary filmmaker on her new movie, true crime's pull toward darkness and lessons from her famous father

I *Love You, Now Die: The Commonwealth v. Michelle Carter*, out July 9 on HBO, takes on the "texting suicide" case in which a teenager, Michelle Carter, was convicted of involuntary manslaughter for encouraging her boyfriend, Conrad Roy III, to kill himself. [Carter started serving a 15-month prison sentence in February.] Why did you want to tell this story? I wanted to create an empathic portrait of two individuals who were struggling with mental health. It would have been easy to make a film that completely vilified Michelle Carter. But I tend to look for the humanity in crime cases. And it's important to remember Conrad Roy. He gets lost in the story.

Michelle's text-message exchanges with Conrad and others shape the narrative of the documentary. What emerged as you sifted through them? That wolf-pack mentality of girlhood. Michelle was always the weakest. She was the oddball, always texting, always asking to be around other people. I worried I was additionally embarrassing Michelle by including this footage, but I hope it paints a portrait of how there was a reason why she felt unsafe.

You've now made four documentaries about true crime. You talk about "radical empathy" guiding your approach as a filmmaker. How do we practice that? It starts with loving yourself. When you look at friendships, your professional life, strangers, think: How can I be helpful or additive in this situation? How can I make it not about myself? It's asking people a lot of questions and being empathic about their responses.

In your new memoir, *All That You Leave Behind*, you write about a pull toward darkness. Where does that come from? My dad [the late New York *Times* columnist David Carr] said, "You pick a beat, stick to it and get really good so you're the person people reach out to for that subject." I chose disturbing crime stories. It's not been great for my psyche. But I like darkness, and I like providing a bit of light. And not to sound like a businessperson, but there's an incredible audience for this.

'I CHOSE DISTURBING CRIME STORIES. IT'S NOT BEEN GREAT FOR MY PSYCHE'

Your dad was open about the dark moments in his life. What did he teach you? He just wanted me to be really good at something. When I was visiting a prison to see the Cannibal Cop [the subject of her 2015 documentary *Thought Crimes*], who was convicted of conspiracy to kidnap and rape women, 99 of 100 fathers would be like, "You're not doing this." My dad was like, "Good job, honey." He taught me we are not equal to our best or worst actions. He was somebody who had done fairly unconscionable things, but he had also done really good things. Life is an amalgamation of these moments. When I approach these stories, it's about thinking of all the moments that have led to this.

You write about your own addiction and sobriety. How was it to excavate those uncomfortable moments? I get frustrated when the only idea of alcoholics we have is the woman who loses everything—the job, the partner. When I stopped drinking, my friends were like, "Wait, you just like to drink." No. You don't know what it's like to live with me. You should be allowed to be not drinking and not make a federal case out of it.

The book explores the resentments that emerged within your family after your father's death. How has it been to navigate that? It becomes a tendency for people in grief to isolate. You have to work against that. Holidays will always be difficult; I feel resentful that other families have no missing parents. But what I've realized is, I'm not alone. A lot of people go through this with grace and dignity, and I can be one of those people.

—MAHITA GAJANAN

GETTY IMAGES

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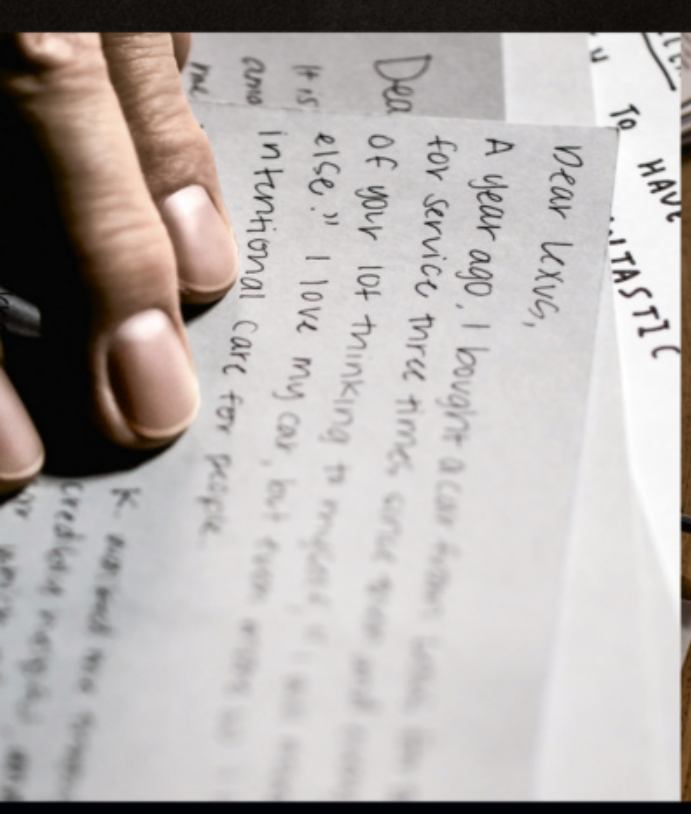

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